

PHYSICAL, CHEMICAL, AND BIOLOGICAL DATA FOR SELECTED STREAMS IN  
CHESTER COUNTY, PENNSYLVANIA, 1969-80

By Craig R. Moore

---

U.S. Geological Survey  
Open-File Report 85-686

Prepared in cooperation with the  
CHESTER COUNTY WATER RESOURCES AUTHORITY  
AND CHESTER COUNTY BOARD OF COMMISSIONERS

Harrisburg, Pennsylvania

1989

DEPARTMENT OF THE INTERIOR  
MANUEL LUJAN, JR., Secretary  
U.S. GEOLOGICAL SURVEY  
Dallas L. Peck, Director

---

For additional information write  
to:  
District Chief  
U.S. Geological Survey  
4th Floor, Federal Building  
P.O. Box 1107  
Harrisburg, Pennsylvania 17108-1107

Copies can be purchased from:  
U.S. Geological Survey  
Books and Open-File Reports Section  
Federal Center  
Box 25425  
Denver, Colorado 80225

## CONTENTS

	Page
Abstract .....	1
Introduction .....	1
Purpose and scope .....	2
Acknowledgments .....	2
Data base .....	2
References cited .....	3

## ILLUSTRATIONS

Figure 1.--Map of Chester County, Pennsylvania showing sampling sites and related streams .....	4
---	---

## TABLES

Table 1.--Sampling sites, station numbers, station names, and drainage areas .....	5
2.--Water-quality data for surface-water sites .....	6
3.--Benthic-invertebrate data .....	168
4.--Brillouin's diversity index, maximum diversity, minimum diversity, and relative evenness .....	262
5.--Median, mean, standard deviation, and standard error values of Brillouin's diversity index .....	277
6.--Alphabetic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania .....	278
7.--Systematic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania .....	284

## FACTORS FOR CONVERTING INCH POUND TO METRIC UNITS

<u>Multiply Inch-Pound Unit</u>	<u>By</u>	<u>To obtain (SI) Unit</u>
Square mile (mi <sup>2</sup> )	2.590	Square kilometer (km <sup>2</sup> )
Micromhos per centimeter at 25° Celsius ( $\mu$ mho/cm)	1.000	Microsiemens per centimeter at 25° Celsius ( $\mu$ S/cm)

PHYSICAL, CHEMICAL, AND BIOLOGICAL DATA FOR SELECTED STREAMS  
IN CHESTER COUNTY, PENNSYLVANIA, 1969-80

---

By Craig R. Moore

---

ABSTRACT

This report presents physical, chemical, and biological data collected at 50 sampling sites on selected streams in Chester County, Pennsylvania from 1969 to 1980. The physical data consist of air and water temperature, stream discharge, suspended sediment, pH, specific conductance, and dissolved oxygen. The chemical data consist of laboratory determinations of total nutrients, major ions, and trace metals. The biological data consist of total coliform, fecal coliform, and fecal streptococcus bacteriological analyses, and benthic-macroinvertebrate population analyses. Brillouin's diversity index, maximum diversity, minimum diversity, and evenness for each sample, and median and mean Brillouin's diversity index, standard deviation, and standard error of the mean were calculated for the benthic-macroinvertebrate data for each site.

INTRODUCTION

Chester County, in southeastern Pennsylvania (fig. 1), adjacent to the Philadelphia and Wilmington metropolitan areas, is undergoing a transition from rural to suburban land use due to moderate population growth. Physical, chemical, and biological data for major streams in Chester County, Pennsylvania have been tabulated to provide base-line of the existing stream conditions. As land-use patterns change and further urbanization takes place, it is anticipated that these data will serve as a basis for comparison of conditions in the future. The information contained in this report was the basis for the interpretive report by Moore (1987), and supersedes an earlier data report by Lium (1976). This report was prepared by the U.S. Geological Survey in cooperation with the Chester County Water Resources Authority and the Chester County Board of Commissioners.

The 14 basins studied drain 720 mi<sup>2</sup> (square miles) of the 760 mi<sup>2</sup> within Chester County. Five of the streams are tributaries to the Schuylkill River and include Valley Creek, Pickering Creek, Stony Run, Pigeon Creek, and French Creek. Tributaries to the Delaware River include Darby Creek, Crum Creek, Ridley Creek, Chester Creek, Red Clay Creek, and White Clay Creek. Big Elk Creek flows into the Chesapeake Bay. The Brandywine is a tributary to the Christiana River, itself a tributary to the Delaware. The Octoraro Creek is a tributary to the Susquehanna River.

### Purpose and Scope

The purpose of this report is to present the physical, chemical, and biological data collected from 50 sampling sites on 14 streams and rivers in Chester County over a 12-year period (1969-80) and to supplement an interpretive report by Moore (1987). The data in this report will be useful to those concerned with water-resources management as urbanization continues. The data can be used to compare present conditions with those of the next several decades to give a better understanding of changes in stream quality in response to increased urbanization. This will aid the development of sound planning procedures that will help to minimize the effects of urbanization on the hydrologic regimen.

### Acknowledgments

The cooperation of the Chester County Board of Commissioners, the Chester County Water Resources Authority, and the Chester County Health Department is gratefully acknowledged. The author extends appreciation to the members and staff of the Chester County Water Resources Authority, especially David C. Yaeck, Executive Director, who has shown sincere interest throughout the investigation. In addition, many persons, particularly Philip Terry and Stuart Pollock, Chester County Health Department, and Richard Casson and Sue Ann Wetzell, formerly with the Chester County Health Department have been of the utmost assistance.

### DATA BASE

The network of 50 stations is shown in figure 1. Table 1 lists station numbers and a brief description of station locations. Table 2 shows the physical, chemical, and bacteriological data collected by station and date. Table 3 shows the benthic-invertebrate data collected by station and date. Table 4 gives the Brillouin's diversity index, maximum diversity, minimum diversity, and evenness for each sample. Table 5 gives the median and mean Brillouin's diversity index, standard deviation, and standard error of the mean for each site. Tables 6 and 7, respectively, are alphabetic and systematic checklists of taxa of benthic-invertebrate organisms reported in the data base. A detailed explanation of methods of data collection and analyses are given by Moore (1987).

#### REFERENCES CITED

- Lium, B. W., 1976, Limnological data for the major streams in Chester County, Pennsylvania: U.S. Geological Survey Open-File Report, 219 p.
- Moore, C. R., 1987, Determination of benthic-invertebrate indices and water-quality trends of selected streams in Chester County, Pennsylvania, 1969-80: U.S. Geological Survey Water-Resources Investigations Report 85-4177, 62 p.

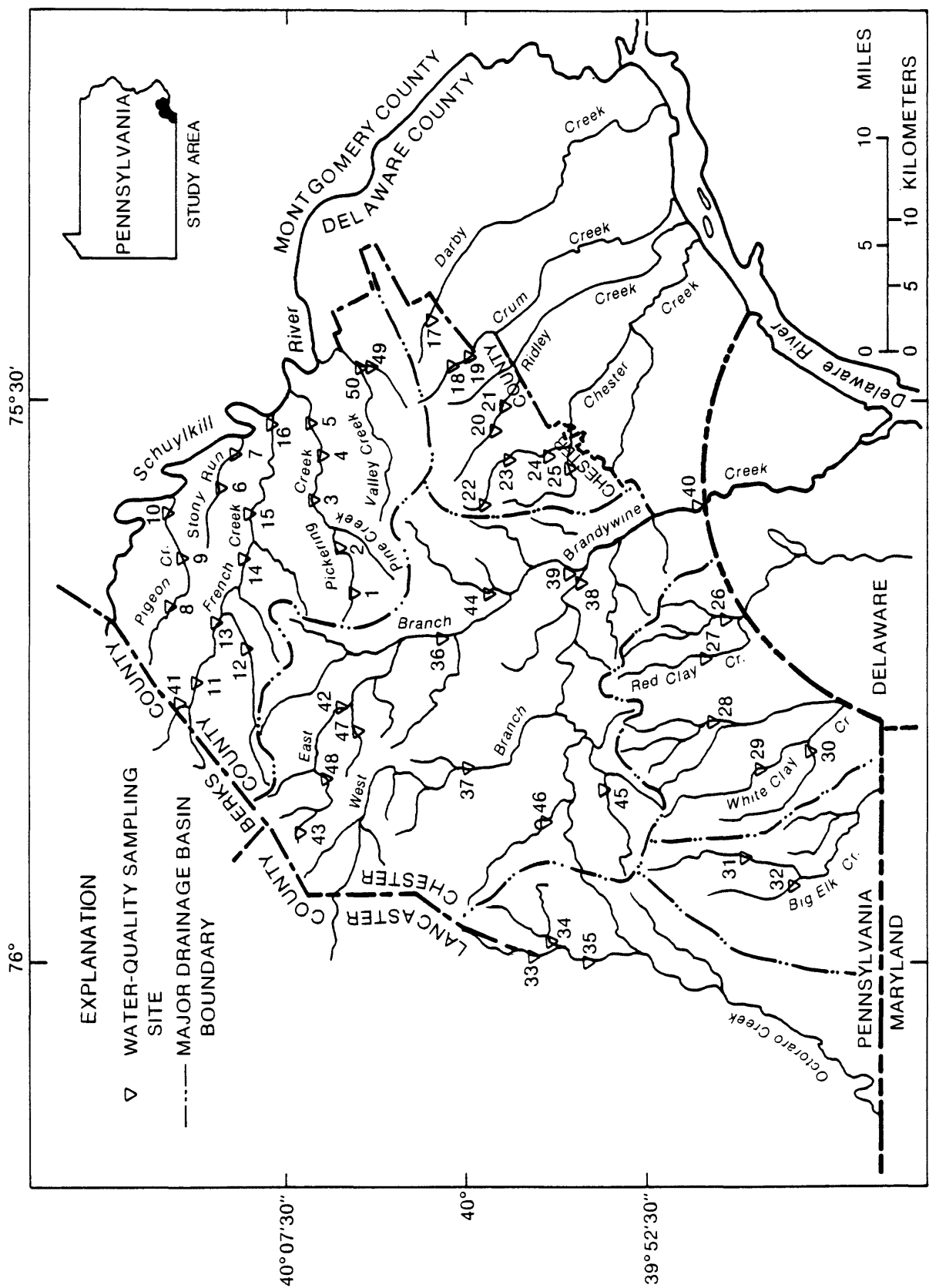


Figure 1.--Chester County, Pennsylvania, showing sampling sites and related streams.  
Site numbers refer to sites listed in table 1.

Table 1. --Sampling sites, station numbers, names, and drainage areas

Site number	Station number	Name	Drainage area (mi <sup>2</sup> )
1	01472170	Pickering Creek near Eagle	3.09
2	01472174	Pickering Creek near Chester Springs	5.98
3	014721854	Pickering Creek at Merlin	21.2
4	014721884	Pickering Creek at Charlestown Road at Charlestown	27.5
5	01472190	Pickering Creek near Phoenixville	31.4
6	01472109	Stony Run near Spring City	2.00
7	01472110	Stony Run at Spring City	4.07
8	01472054	Pigeon Creek near Bucktown	4.20
9	01472065	Pigeon Creek at Porters Mill	6.97
10	01472080	Pigeon Creek near Parker Ford	12.0
11	01472129	French Creek near Knauertown	11.7
12	01472140	South Branch French Creek at Coventryville	12.4
13	01472138	French Creek near Coventryville	19.9
14	01472154	French Creek near Pughtown	46.1
15	01472157	French Creek near Phoenixville	59.1
16	014721612	French Creek at railroad bridge at Phoenixville	70.7
17	01475300	Darby Creek at Waterloo Mills near Devon	5.15
18	01475830	Crum Creek near Paoli	6.16
19	01475840	Crum Creek at Whitehorse	10.1
20	01476430	Ridley Creek at Goshenville	4.22
21	01476435	Ridley Creek at Dutton Mill near West Chester	9.71
22	01476790	East Branch Chester Creek at Green Hill	0.63
23	01476830	East Branch Chester Creek at Milltown	5.77
24	01476835	East Branch Chester Creek at Westtown School	10.4
25	01476840	Tributary (Goose Creek) to East Branch Chester Creek near West Chester	4.28
26	01479800	East Branch Red Clay Creek near Five Point	10.2
27	01479680	West Branch Red Clay Creek at Kennett Square	9.79
28	01478120	East Branch White Clay Creek near Avondale	11.3
29	01478190	Middle Branch White Clay Creek near Wickerton	9.94
30	01478220	West Branch White Clay Creek near Chesterville	9.92
31	01494900	East Branch Elk Creek at Elkview	11.1
32	01494950	West Branch Elk Creek near Oxford	10.0
33	01578340	East Branch Octoraro Creek at Christiana	11.8
34	01578343	Valley Creek at Atglen	10.5
35	41578345	East Branch Octoraro Creek at Steelville	32.9
36	01480700	East Branch Brandywine Creek near Downingtown	60.6
37	01480434	West Branch Brandywine Creek at Rock Run	37.3
38	01480640	West Branch Brandywine Creek at Wawaset	134.
39	01480950	East Branch Brandywine Creek at Wawaset	123.
40	01481030	Brandywine Creek near Chadds Ford	291.
41	01472126	French Creek at Trythall	5.06
42	01480653	East Branch Brandywine Creek at Glenmoore	16.5
43	01480647	East Branch Brandywine Creek near Struble Dam	4.36
44	01480903	Valley Creek at Mullsteins Meadows near Downingtown	16.1
45	01480632	Doe Run at Springdell	11.8
46	01480629	Buck Run at Doe Run	22.6
47	01480656	Indian Run near Springton	4.26
48	01480648	East Branch Brandywine Creek near Cupola	5.98
49	01473167	Little Valley Creek at Howellville	6.45
50	01473168	Valley Creek near Valley Forge	12.7



TABLE 2. -- Water-quality data for surface-water sites  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472054 - PIGEON CREEK NEAR BUCKTOWN, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <u>d</u> /	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV , 1969	--	84215 <sup>a</sup> /	1.3	140	7.0	5.0	--	1000	--	800
FEB , 1970	--	84215	4.2	80	7.2	5.0	--	620	--	120
MAY , 1970	--	84215	4.3	105	7.4	13.0	--	580	--	32
SEP , 1970	--	84215	1.5	100	8.4	12.0	--	8000	--	780
MAY , 1971	--	84215	4.5	110	7.6	9.5	--	700	90	30
SEP , 1971	--	84215	6.2	100	6.9	16.0	--	13000	260	580
OCT , 1972	--	84215	3.6	102	6.0	13.0	--	12700	190	1000
OCT , 1973	0825	1028 <sup>b</sup> /	--	120	6.4	16.0	11.0	14300	240	300
OCT , 1974	1230	1028	--	80	7.2	7.5	10.2	--	--	--
NOV , 1975	0800	1028	--	120	6.7	12.5	9.6	--	--	--
OCT , 1976	1230	1028	--	120	7.0	11.0	10.0	--	--	--
OCT , 1977	1600	80010 <sup>c</sup> /	--	125	6.8	13.0	10.2	--	--	--
OCT , 1978	1530	80010	--	138	6.8	12.5	10.0	--	--	--
NOV , 1979	1515	80010	--	89	6.1	8.5	11.5	--	--	--
NOV , 1980	1345	80010	--	130	6.8	9.5	10.5	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	6.6	--	2.7	--	4.7	--	.9	--
SEP , 1970	--	--	8.8	--	1.5	--	3.3	--	.9	--
MAY , 1971	--	--	8.3	--	2.8	--	5.0	--	2.8	--
SEP , 1971	--	--	8.7	--	2.8	--	5.7	--	1.5	--
OCT , 1972	--	--	9.0	--	2.7	--	4.8	--	1.1	--
OCT , 1973	37	11	--	9.5	--	3.3	--	6.0	--	1.4
OCT , 1974	44	18	--	12	--	3.5	--	5.4	--	1.1
NOV , 1975	35	14	--	10	--	2.5	--	4.7	--	1.2
OCT , 1976	38	13	--	9.5	--	3.4	--	5.1	--	2.0
OCT , 1977	45	22	--	12	--	3.7	--	5.6	--	1.6
OCT , 1978	36	13	--	9.3	--	3.1	--	5.5	--	1.2
NOV , 1979	--	--	--	--	--	--	--	--	--	--
NOV , 1980	38	--	--	10	--	3.2	--	5.5	--	2.3

<sup>a</sup>/ Chester County Health Department Laboratory, Pennsylvania.

<sup>b</sup>/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

<sup>c</sup>/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

<sup>d</sup>/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

## 01472054 - PIGEON CREEK NEAR BUCKTOWN, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LILITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SOLIDS, SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	RESIDUE AT 103 DEG C, DIS- SOLVED (MG/L)
NOV , 1969	--	--	--	18	5.0	--	--	--	--
FEB , 1970	--	--	--	16	14	--	--	--	--
MAY , 1970	--	--	--	22	--	--	--	--	74
SEP , 1970	--	--	--	14	4.1	--	--	--	83
MAY , 1971	--	--	--	18	5.5	--	--	--	42
SEP , 1971	--	--	--	11	2.6	--	--	--	90
OCT , 1972	--	--	--	14	4.1	--	--	--	62
OCT , 1973	32	0	26	14	4.2	.70	14	--	67
OCT , 1974	32	0	26	18	3.9	.20	14	79	--
NOV , 1975	26	0	21	15	4.4	.10	13	81	--
OCT , 1976	30	0	25	20	6.4	.10	12	82	--
OCT , 1977	28	0	23	19	5.2	<.10	14	89	--
OCT , 1978	28	0	23	17	4.8	<.10	14	80	--
NOV , 1979	--	--	15	14	4.4	.00	13	--	--
NOV , 1980	--	--	--	20	6.0	.10	15	88	--

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
NOV , 1969	--	.60	--	--	--	--	--	--	--	--
FEB , 1970	--	1.1	--	--	--	--	--	--	--	.030
MAY , 1970	--	.57	--	--	--	--	--	--	--	.020
SEP , 1970	--	.81	.010	--	.010	--	--	--	.030	.020
MAY , 1971	--	.93	<.010	--	.160	.34	--	--	.160	.002
SEP , 1971	--	1.1	.010	--	.010	.26	--	--	.130	.010
OCT , 1972	--	.87	<.010	--	.010	.01	--	--	.040	.030
OCT , 1973	67	.88	.001	.88	.070	.41	.48	1.4	.030	.030
OCT , 1974	74	.79	--	--	.020	.27	.29	--	.030	.020
NOV , 1975	64	.97	--	--	<.010	.56	.56	--	.050	.020
OCT , 1976	74	.63	.010	.64	.040	.21	.25	.89	.060	.030
OCT , 1977	75	.80	<.010	.80	.030	.39	.42	1.2	.020	<.010
OCT , 1978	69	1.6	.010	1.6	.070	.22	.29	1.9	.020	.010
NOV , 1979	--	--	--	.89	.000	.25	.25	1.1	.030	--
NOV , 1980	--	.51	.010	.52	.060	.13	.19	.71	.050	.030

## 01472054 - PIGEON CREEK NEAR BUCKTOWN, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	--	--	--	--	--	--	--	--
SEP , 1970	--	<100	--	<200	--	<250	--	<150	--	--
MAY , 1971	--	<100	--	<900	--	<250	--	<100	--	--
SEP , 1971	--	<150	--	<200	--	<250	--	290	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1973	--	<100	--	<200	--	<250	--	440	--	--
OCT , 1974	ND	--	ND	--	<2	--	<20	290	--	ND
NOV , 1975	ND	--	ND	--	ND	--	ND	--	110	<2
OCT , 1976	<2	--	ND	--	ND	--	ND	--	20	5
OCT , 1977	16	--	<20	--	ND	--	<20	--	160	2
OCT , 1978	ND	--	<2	--	ND	--	2	--	160	8
NOV , 1979	ND	--	ND	--	ND	--	<2	--	140	3
NOV , 1980	--	10	--	--	--	0	--	--	--	--
NOV , 1980	1	--	.00	--	1	--	1	--	160	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	--	--	--	--	--	--	--	--
SEP , 1970	<100	<250	--	<250	--	<50	--	--	7	.08
MAY , 1971	<50	<250	--	<250	--	<20	--	--	3	.01
SEP , 1971	<50	<250	--	<250	--	<20	--	--	6	.07
OCT , 1972	<50	<250	--	<250	--	<50	--	--	5	.08
OCT , 1973	<50	<250	--	<250	--	<20	--	--	--	--
OCT , 1974	--	70	--	--	2	--	20	--	--	--
NOV , 1975	--	--	60	--	3	--	ND	--	--	--
OCT , 1976	--	--	50	--	3	--	<20	--	--	--
OCT , 1977	--	--	60	--	6	--	20	--	--	--
OCT , 1978	--	--	80	--	2	--	<20	.00	--	--
NOV , 1979	--	--	40	--	3	--	<20	.00	--	--
NOV , 1980	--	--	--	--	--	160	--	--	--	--
NOV , 1980	--	--	60	--	2	--	3	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472065 - PIGEON CREEK AT PORTERS MILL, PA

		AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sup>d</sup>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	
DATE	TIME										
NOV 14, 1969	--	84215 <sup>a</sup> /	2.4	140	7.0	6.0	--	940	--	670	
FEB 19, 1970	--	84215	8.8	95	7.3	6.0	--	650	--	490	
MAY 05, 1971	--	84215	8.3	106	7.7	14.0	--	80	--	8	
SEP 29, 1971	--	84215	2.7	90	8.2	12.0	--	6300	--	1200	
MAY 04, 1971	--	84215	8.8	120	7.6	10.5	--	1300	230	67	
SEP 28, 1971	--	84215	12	110	7.3	16.0	--	19300	380	1100	
OCT 09, 1972	1215	84215	7.1	115	6.8	12.5	--	17700	190	1600	
OCT 03, 1973	0905	1028 <sup>b</sup> /	--	130	6.4	16.0	11.2	35600	4800	5700	
OCT 24, 1974	1110	1028	--	75	7.5	9.5	11.2	--	--	--	
NOV 05, 1975	0930	1028	--	130	7.1	13.0	10.2	--	--	--	
OCT 26, 1976	1430	1028	--	140	7.1	12.0	10.4	--	--	--	
OCT 20, 1977	1500	80010 <sup>c</sup> /	--	145	7.1	14.5	10.0	--	--	--	
OCT 31, 1978	1445	80010	--	160	6.9	13.0	10.9	--	--	--	
NOV 08, 1979	1615	80010	--	108	7.0	8.0	11.7	--	--	--	
NOV 05, 1980	1500	80010	--	140	7.0	--	11.2	--	--	--	
DATE		HARD- NESS (MG/ AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV 14, 1969	--	--	--	--	--	--	--	--	--	--	--
FEB 19, 1970	--	--	--	--	--	--	--	--	--	--	--
MAY 05, 1971	--	--	--	8.2	--	2.8	--	6.8	--	1.4	--
SEP 29, 1971	--	--	--	9.7	--	1.5	--	3.9	--	.8	--
MAY 04, 1971	--	--	--	9.3	--	3.1	--	6.8	--	3.1	--
SEP 28, 1971	--	--	--	8.2	--	5.2	--	6.1	--	1.4	--
OCT 09, 1972	--	--	--	9.0	--	2.7	--	5.5	--	1.1	--
OCT 03, 1973	42	14	--	11	--	3.6	--	6.5	--	2.2	--
OCT 24, 1974	46	15	--	12	--	3.9	--	6.0	--	.90	--
NOV 05, 1975	37	12	--	10	--	2.8	--	5.4	--	1.3	--
OCT 26, 1976	40	10	--	10	--	3.6	--	5.3	--	2.3	--
OCT 20, 1977	52	22	--	14	--	4.2	--	6.1	--	1.8	--
OCT 31, 1978	44	16	--	12	--	3.5	--	6.5	--	1.6	--
NOV 08, 1979	--	--	--	--	--	--	--	--	--	--	--
NOV 05, 1980	46	--	--	12	--	3.8	--	6.4	--	2.0	--

<sup>a</sup>/ Chester County Health Department Laboratory, Pennsylvania.

<sup>b</sup>/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

<sup>c</sup>/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

<sup>d</sup>/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472065 - PIGEON CREEK AT PORTERS MILL, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
NOV , 1969	--	--	--	15	11	--	--	--	--	--
FEB , 1970	--	--	--	16	15	--	--	--	--	--
MAY , 1970	--	--	--	16	18	--	--	--	102	--
SEP , 1970	--	--	--	8.8	7.8	--	--	--	81	--
MAY , 1971	--	--	--	17	6.4	--	--	--	83	--
SEP , 1971	--	--	--	12	6.2	--	--	--	94	--
OCT , 1972	--	--	--	12	7.2	--	--	--	71	--
OCT , 1973	34	0	28	15	6.2	.70	15	--	--	77
OCT , 1974	38	0	31	17	5.0	.20	15	90	--	79
NOV , 1975	30	0	25	14	6.3	.10	14	86	--	69
OCT , 1976	37	0	30	20	7.0	.10	14	85	--	81
OCT , 1977	37	0	30	19	6.2	<.10	17	97	--	87
OCT , 1978	34	0	28	16	6.0	<.10	13	86	--	75
NOV , 1979	--	--	18	14	5.9	.00	15	--	--	--
NOV , 1980	--	--	--	18	5.6	.10	18	93	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
NOV , 1969	.38	--	--	--	--	--	--	--	.050
FEB , 1970	1.5	--	--	--	--	--	--	--	.080
MAY , 1970	.30	--	--	--	--	--	--	--	.020
SEP , 1970	1.2	.010	--	--	--	--	--	<.00	.030
MAY , 1971	1.0	<.010	--	--	--	--	--	.070	.020
SEP , 1971	2.8	.010	--	.010	.15	--	--	.080	.010
OCT , 1972	1.4	<.010	--	.010	.23	--	--	.050	.030
OCT , 1973	1.0	--	--	.070	.53	.60	--	.050	.050
OCT , 1974	1.1	--	--	.010	.35	.36	--	.030	.020
NOV , 1975	1.4	--	--	<.010	.59	.59	--	.050	.020
OCT , 1976	.86	.010	.87	.050	.40	.45	1.3	.060	.030
OCT , 1977	1.2	<.010	1.2	.020	.38	.40	1.6	.040	.020
OCT , 1978	1.1	.010	1.1	.070	.31	.38	1.5	.020	.010
NOV , 1979	--	--	1.4	.000	.20	.20	1.6	.030	--
NOV , 1980	.90	.000	.90	.010	.21	.22	1.1	.040	.020

## 01472065 - PIGEON CREEK AT PORTERS MILL, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
14... 1970	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
19... 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	--	--	--	--	--	--	--	--
05... 1970	--	--	--	--	--	--	--	--	--	--
SEP , 1970	--	--	--	--	--	--	--	--	--	--
29... 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1971	--	<100	--	<900	--	<250	--	<100	--	--
04... 1971	--	<150	--	<200	--	<250	--	<200	--	--
SEP , 1971	--	<100	--	<200	--	<250	--	<150	--	--
28... 1971	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	<500	--	--
09... 1972	--	<100	--	<200	--	<250	--	<500	--	--
OCT , 1973	ND	--	ND	--	ND	--	ND	340	--	ND
03... 1973	ND	--	ND	--	ND	--	ND	--	90	<2
OCT , 1974	ND	--	ND	--	ND	--	ND	--	80	4
24... 1974	ND	--	ND	--	ND	--	ND	--	80	4
NOV , 1975	<2	--	ND	--	ND	--	ND	--	80	4
05... 1975	<2	--	ND	--	ND	--	ND	--	80	4
OCT , 1976	<2	--	<20	--	ND	--	<20	--	140	2
26... 1976	<2	--	<20	--	ND	--	<20	--	140	2
OCT , 1977	ND	--	<2	--	ND	--	2	--	130	9
20... 1977	ND	--	<2	--	ND	--	2	--	130	9
OCT , 1978	4	--	ND	--	4	--	ND	--	110	9
31... 1978	4	--	ND	--	4	--	ND	--	110	9
NOV , 1979	--	10	--	--	--	0	--	--	--	--
08... 1979	--	10	--	--	--	0	--	--	--	--
NOV , 1980	1	--	1	--	2	--	2	--	130	0
05... 1980	1	--	1	--	2	--	2	--	130	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
14... 1970	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
19... 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	500	--	--	--	--	--	--	9	.20
05... 1970	--	500	--	--	--	--	--	--	9	.20
SEP , 1970	<500	500	--	<250	--	<20	--	--	1	.00
29... 1970	<500	500	--	<250	--	<20	--	--	1	.00
MAY , 1971	<50	<250	--	<250	--	<20	--	--	5	.12
04... 1971	<50	<250	--	<250	--	<20	--	--	5	.12
SEP , 1971	<50	<250	--	<250	--	<50	--	--	6	.20
28... 1971	<50	<250	--	<250	--	<50	--	--	6	.20
OCT , 1972	<500	<250	--	<250	--	<20	--	--	--	--
09... 1972	<500	<250	--	<250	--	<20	--	--	--	--
OCT , 1973	--	50	--	--	2	--	<20	--	--	--
03... 1973	--	50	--	--	2	--	<20	--	--	--
OCT , 1974	--	--	50	--	4	--	ND	--	--	--
24... 1974	--	--	50	--	4	--	ND	--	--	--
NOV , 1975	--	--	30	--	3	--	<20	--	--	--
05... 1975	--	--	30	--	3	--	<20	--	--	--
OCT , 1976	--	--	80	--	2	--	20	--	--	--
26... 1976	--	--	80	--	2	--	20	--	--	--
OCT , 1977	--	--	60	--	2	--	<20	.00	--	--
20... 1977	--	--	60	--	2	--	<20	.00	--	--
OCT , 1978	--	--	40	--	<2	--	<20	.00	--	--
31... 1978	--	--	40	--	<2	--	<20	.00	--	--
NOV , 1979	--	--	--	--	--	10	--	--	--	--
08... 1979	--	--	--	--	--	10	--	--	--	--
NOV , 1980	--	--	50	--	1	--	2	.00	--	--
05... 1980	--	--	50	--	1	--	2	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472080 - PIGEON CREEK NEAR PARKER FORD, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sub>d</sub>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN DIS- SOLVE (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCOCCI FECAL, (COLS. PER 100 ML)
NOV 14, 1969	--	84215 <sub>a</sub> /	4.2	145	7.0	8.0	-	1200	--	100
FEB 19, 1970	--	84215	12	105	7.7	6.0	-	920	--	690
MAY 06, 1970	--	84215	12	106	8.0	13.0	-	44	--	2
SEP 29, 1970	--	84215	3.0	90	8.1	12.0	-	990	--	1500
MAY 04, 1971	--	84215	14	130	7.9	12.0	-	650	100	45
SEP 28, 1971	--	84215	19	120	7.4	16.0	-	26000	480	680
OCT 09, 1972	1030	84215	11	120	6.1	12.5	-	28000	1500	2500
OCT 03, 1973	0935	1028 <sub>b</sub> /	8.8	160	6.5	16.5	11.2	26300	2500	2400
OCT 24, 1974	1030	1028	4.6	85	7.3	5.5	10.	--	--	--
NOV 05, 1975	1345	1028	7.3	--	7.5	15.5	-	--	--	--
OCT 26, 1976	0915	1028	17.1	175	6.8	11.0	9.	--	--	--
OCT 20, 1977	1400	80010 <sub>c</sub> /	7.7	160	7.3	14.0	10.	--	--	--
OCT 31, 1978	1400	80010	6.2	255	6.9	13.0	11.	--	--	--
NOV 14, 1979	0930	80010	41.0	138	6.2	6.0	12.	--	--	--
NOV 05, 1980	1630	80010	7.6	280	7.2	8.5	10.	--	--	--
DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL, RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV 14, 1969	--	--	3.6	--	--	--	--	--	--	--
FEB 19, 1970	--	--	--	--	--	--	--	--	--	--
MAY 06, 1970	--	--	7.8	--	3.4	--	6.6	--	1.5	--
SEP 29, 1970	--	--	14	--	4.0	--	8.3	--	2.5	--
MAY 04, 1971	--	--	12	--	3.5	--	7.1	--	3.5	--
SEP 28, 1971	--	--	9.7	--	5.7	--	9.5	--	1.8	--
OCT 09, 1972	--	--	10	--	3.3	--	5.8	--	1.6	--
OCT 03, 1973	48	18	--	12	--	4.3	--	7.5	--	2.7
OCT 24, 1974	53	20	--	14	--	4.5	--	6.9	--	1.5
NOV 05, 1975	52	26	--	13	--	4.8	--	6.4	--	1.7
OCT 26, 1976	52	19	--	13	--	4.8	--	6.3	--	4.4
OCT 20, 1977	57	25	--	15	--	4.8	--	6.8	--	2.4
OCT 31, 1978	55	22	--	14	--	4.8	--	7.6	--	2.1
NOV 14, 1979	--	--	--	--	--	--	--	--	--	--
NOV 05, 1980	54	--	--	14	--	4.6	--	6.9	--	2.1

a/ Chester County Health Department Laboratory, Pennsylvania.

b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

## 01472080 - PIGEON CREEK NEAR PARKER FORD, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALK LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
NOV , 1969	--	--	--	--	15	--	--	--	--	--
FEB , 1970	--	--	--	21	16	--	--	--	--	--
MAY , 1970	--	--	--	44	10	--	--	--	--	--
SEP , 1970	--	--	--	8.5	8.8	--	--	--	101	--
MAY , 1971	--	--	--	13	5.5	--	--	--	101	--
SEP , 1971	--	--	--	14	6.2	--	--	--	84	--
OCT , 1972	--	--	--	15	7.0	--	--	--	71	--
OCT , 1973	37	0	30	17	7.7	.70	15	--	--	85
OCT , 1974	41	0	34	20	6.2	.20	16	95	--	90
NOV , 1975	32	0	26	17	7.4	.10	14	98	--	80
OCT , 1976	40	0	33	23	11	.10	13	111	--	96
OCT , 1977	39	0	32	22	7.3	<.10	17	102	--	95
OCT , 1978	40	0	33	20	7.7	<.10	15	106	--	91
NOV , 1979	--	--	23	17	8.4	.10	15	--	--	--
NOV , 1980	--	--	--	21	7.2	.10	18	100	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
NOV , 1969	.85	--	--	--	--	--	--	--	--
FEB , 1970	1.7	--	--	--	--	--	--	--	--
MAY , 1970	1.4	--	--	--	--	--	--	--	--
SEP , 1970	1.4	.020	--	.150	--	--	--	.002	.050
MAY , 1971	1.2	.010	--	.060	.03	--	--	.200	.030
SEP , 1971	2.8	.010	--	.010	.46	--	--	.130	.010
OCT , 1972	2.0	.010	--	.010	.10	--	--	.080	.050
OCT , 1973	1.4	--	--	.090	.91	1.0	--	.130	.070
OCT , 1974	1.6	--	--	.020	.40	.42	--	.050	<.010
NOV , 1975	2.2	--	--	.010	.65	.66	--	.050	.030
OCT , 1976	1.2	.030	1.2	.170	.68	.85	2.1	.170	.070
OCT , 1977	1.5	.010	1.5	.010	.52	.53	2.0	.050	.050
OCT , 1978	1.8	.010	1.8	.170	.27	.44	2.2	.030	.030
NOV , 1979	--	--	2.2	.000	.11	.11	2.3	.040	--
NOV , 1980	1.3	.010	1.3	.050	.15	.20	1.5	.040	.020



## 01472080 - PIGEON CREEK NEAR PARKER FORD, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV 14, 1969	--	--	--	--	--	--	--	--	--	--
FEB 19, 1970	--	--	--	--	--	--	--	--	--	--
MAY 06, 1971	--	<100	--	<200	--	<250	--	<150	--	--
SEP 29, 1971	--	<100	--	<900	--	<250	--	<100	--	--
MAY 04, 1971	--	<150	--	<200	--	250	--	<200	--	--
SEP 28, 1971	--	<100	--	<200	--	<250	--	<150	--	--
OCT 09, 1972	--	<100	--	<200	--	<250	--	<500	--	--
OCT 03, 1973	ND	--	ND	--	ND	--	ND	440	--	ND
OCT 24, 1974	ND	--	ND	--	ND	--	ND	--	110	2
NOV 05, 1975	ND	--	ND	--	ND	--	ND	--	40	<2
OCT 26, 1976	<2	--	<20	--	ND	--	<20	--	210	2
OCT 20, 1977	ND	--	<2	--	ND	--	2	--	140	10
OCT 31, 1978	ND	--	ND	--	ND	--	ND	--	110	3
NOV 14, 1979	--	20	--	--	--	0	--	--	--	--
NOV 05, 1980	1	--	.00	--	1	--	1	--	110	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV 14, 1969	--	--	--	--	--	--	--	--	--	--
FEB 19, 1970	--	--	--	--	--	--	--	--	19	.62
MAY 06, 1971	<100	--	--	<250	--	<50	--	--	9	.29
SEP 29, 1971	<50	--	--	<250	--	<20	--	--	1	.00
MAY 04, 1971	<50	<250	--	<250	--	<20	--	--	5	.19
SEP 28, 1971	<50	<250	--	<250	--	<50	--	--	7	.36
OCT 09, 1972	<50	<250	--	<250	--	<20	--	--	--	--
OCT 03, 1973	--	60	--	--	ND	--	<20	--	--	--
OCT 24, 1974	--	--	60	--	3	--	<20	--	--	--
NOV 05, 1975	--	--	30	--	4	--	<20	--	--	--
OCT 26, 1976	--	--	90	--	8	--	30	--	--	--
OCT 20, 1977	--	--	60	--	ND	--	ND	.00	--	--
OCT 31, 1978	--	--	50	--	ND	--	ND	.00	--	--
NOV 14, 1979	--	--	--	--	--	150	--	--	--	--
NOV 05, 1980	--	--	40	--	0	--	2	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472109 - STONY RUN NEAR SPRING CITY, PA

DATE	TIME	ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	CIFIC CON- DUC- TANCE (US/CM) <sup>d</sup>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV , 1969	--	84215 <sup>a</sup> / <sub>a</sub>	.50	262	6.9	7.0	--	4000	--	400
FEB , 1970	--	84215	5.2	160	7.2	7.0	--	50	--	<1
MAY , 1970	--	84215	6.9	110	8.1	13.0	--	630	--	12
SEP , 1970	--	84215	.70	285	8.4	15.0	--	21000	--	1300
MAY , 1971	--	84215	1.0	270	8.9	5.5	--	930	80	55
SEP , 1971	--	84215	1.9	210	7.3	16.0	--	50000	760	1500
OCT , 1972	0930	84215	2.2	221	6.4	11.5	--	38000	1500	2600
OCT , 1973	1120	1028 <sup>b</sup> / <sub>b</sub>	--	270	7.0	17.0	--	40300	330	440
OCT , 1974	0945	1028	--	430	7.6	5.0	9.0	--	--	--
NOV , 1975	1430	1028	--	230	7.6	17.0	10.9	--	--	--
OCT , 1976	1000	1028	--	260	6.5	10.0	9.6	--	--	--
OCT , 1977	1130	80010 <sup>c</sup> / <sub>c</sub>	--	255	7.4	14.0	10.1	--	--	--
OCT , 1978	1115	80010	--	400	7.0	12.5	12.8	--	--	--
NOV , 1979	1115	80010	--	229	6.4	10.0	11.8	--	--	--
NOV , 1980	1130	80010	--	370	7.2	9.0	10.3	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	14	--	6.2	--	11	--	3.5	--
SEP , 1970	--	--	21	--	6.6	--	36	--	5.8	--
MAY , 1971	--	--	18	--	6.9	--	16	--	--	--
SEP , 1971	--	--	17	--	6.8	--	12	--	3.6	--
OCT , 1972	--	--	17	--	5.6	--	13	--	4.6	--
OCT , 1973	74	18	--	18	--	7.0	--	22	--	3.4
OCT , 1974	120	55	--	33	--	9.0	--	36	--	7.0
NOV , 1975	72	38	--	18	--	6.5	--	13	--	2.8
OCT , 1976	74	30	--	17	--	7.6	--	11	--	11
OCT , 1977	87	42	--	22	--	7.9	--	13	--	4.6
OCT , 1978	81	28	--	21	--	6.9	--	21	--	3.1
NOV , 1979	--	--	--	--	--	--	--	--	--	--
NOV , 1980	86	--	--	23	--	7.0	--	32	--	5.5

<sup>a</sup>/ Chester County Health Department Laboratory, Pennsylvania.

<sup>b</sup>/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

<sup>c</sup>/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

<sup>d</sup>/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472109 - STONY RUN NEAR SPRING CITY, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
NOV , 1969										
12... 1970	--	--	--	16	10	--	--	--	--	--
FEB... 1970	--	--	--	24	17	--	--	--	--	--
MAY... 1970	--	--	--	11	12	--	--	--	282	--
SEP... 1970	--	--	--	22	46	--	--	--	248	--
MAY , 1971	--	--	--	33	15	--	--	--	137	--
SEP... 1971	--	--	--	18	17	--	--	--	171	--
OCT , 1972	--	--	--	27	19	--	--	--	136	--
OCT , 1973	68	0	56	23	18	.20	20	--	--	145
OCT , 1974	79	0	65	25	64	.20	18	249	--	230
NOV , 1975	42	0	34	25	16	.10	17	148	--	120
OCT , 1976	54	0	44	33	19	.10	14	167	--	140
OCT , 1977	56	0	46	30	18	.10	18	168	--	140
OCT , 1978	65	0	53	26	28	<.10	17	184	--	160
NOV , 1979	--	--	26	25	19	.10	17	--	--	--
NOV , 1980	--	--	--	38	32	.10	20	219	--	--

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
NOV , 1969									
12... 1970	.99	--	--	--	--	--	--	--	.580
FEB... 1970	1.4	--	--	--	--	--	--	--	.140
MAY... 1970	1.7	--	--	--	--	--	--	--	--
SEP... 1970	3.2	.050	--	--	--	--	--	.790	.670
MAY , 1971	5.3	.050	--	.300	.18	--	--	.350	.290
SEP... 1971	7.1	.040	--	.010	.82	--	--	.160	.070
OCT , 1972	5.3	.060	--	.020	.61	--	--	.470	.360
OCT , 1973	5.4	--	--	.140	1.0	1.1	--	.740	.740
OCT , 1974	3.8	--	--	.200	.76	.96	--	4.70	1.20
NOV , 1975	6.6	--	--	.020	.78	.80	--	.330	.280
OCT , 1976	1.9	.030	1.9	.470	1.6	2.1	4.0	.520	.370
OCT , 1977	4.3	.050	4.3	.090	.57	.66	5.0	.420	.380
OCT , 1978	4.5	.020	4.5	.040	.31	.35	4.9	.490	.490
NOV , 1979	--	--	--	.000	.16	.16	--	.290	--
NOV , 1980	2.7	.070	2.8	.070	.54	.61	3.4	1.20	1.00

## 01472109 - STONY RUN NEAR SPRING CITY, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	--	--	--	--	--	--	--	--
SEP , 1970	--	<100	--	<200	--	<250	--	<150	--	--
MAY , 1971	--	<100	--	<900	--	<250	--	<100	--	--
SEP , 1971	--	<150	--	<200	--	<250	--	320	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	480	--	--
OCT , 1973	--	<100	--	<200	--	<250	--	770	--	--
OCT , 1974	<2	--	ND	--	ND	--	ND	280	--	2
NOV , 1975	ND	--	ND	--	ND	--	ND	--	120	<2
OCT , 1976	<2	--	ND	--	ND	--	ND	--	<10	6
OCT , 1977	<2	--	<20	--	ND	--	<20	--	290	270
OCT , 1978	ND	--	<2	--	ND	--	2	--	60	9
NOV , 1979	ND	--	ND	--	ND	--	<2	--	110	ND
NOV , 1980	--	20	--	--	--	0	--	--	--	--
OCT , 1980	3	--	.00	--	1	--	2	--	130	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	--	--	--	--	--	--	--	--
SEP , 1970	<100	--	--	<250	--	<50	--	--	43	.80
MAY , 1971	<50	<250	--	<250	--	<20	--	--	14	.03
SEP , 1971	<50	<250	--	<250	--	<20	--	--	15	.04
OCT , 1972	<50	<250	--	<250	--	<50	--	--	9	.05
OCT , 1973	<50	<250	--	<250	--	<60	--	--	--	--
OCT , 1974	--	50	--	--	<2	--	20	--	--	--
NOV , 1975	--	--	90	--	5	--	20	--	--	--
OCT , 1976	--	--	50	--	2	--	<20	--	--	--
OCT , 1977	--	--	160	--	7	--	20	--	--	--
OCT , 1978	--	--	110	--	2	--	<20	.00	--	--
NOV , 1979	--	--	30	--	<2	--	ND	.00	--	--
NOV , 1980	--	--	--	--	--	20	--	--	--	--
OCT , 1980	--	--	160	--	2	--	20	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472110 - STONY RUN AT SPRING CITY, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sub>d</sub>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV 13, 1969	--	84215a/	.70	190	6.9	15.0	--	40	--	<1
FEB 19, 1970	--	84215	7.1	150	7.6	5.0	--	2000	--	900
MAY 06, 1970	--	84215	9.4	109	8.1	13.0	--	8	--	<1
SEP 29, 1970	--	84215	9.1	195	7.9	15.0	--	6400	--	550
MAY 04, 1971	--	84215	2.3	220	8.7	16.0	--	4200	1000	130
SEP 28, 1971	--	84215	3.6	205	7.5	17.0	--	72000	840	4100
OCT 09, 1972	0900	84215	3.7	240	6.5	12.0	--	6600	4100	4500
OCT 02, 1973	1035	1028b/	1.6	260	6.8	17.0	9.8	28300	620	280
OCT 24, 1974	0900	1028	3.3	165	7.7	4.0	9.2	--	--	--
NOV 05, 1975	1500	1028	--	--	7.3	16.5	11.0	--	--	--
OCT 26, 1976	1045	1028	--	275	7.0	11.0	9.2	--	--	--
OCT 20, 1977	1030	80010c/	0.75	295	7.2	13.0	9.8	--	--	--
OCT 31, 1978	1215	80010	--	310	7.3	12.0	12.6	--	--	--
NOV 09, 1979	1315	80010	--	227	6.7	11.0	13.0	--	--	--
NOV 05, 1980	1000	80010	--	280	7.1	8.0	9.7	--	--	--

DATE	HARD- NESS (MG/L AS CaCO3)	HARD- NESS NONCAR- BONATE (MG/L CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV 13, 1969	--	--	--	--	--	--	--	--	--	--
FEB 19, 1970	--	--	--	--	--	--	--	--	--	--
MAY 06, 1970	--	--	18	--	6.6	--	12	--	2.1	--
SEP 29, 1970	--	--	19	--	6.0	--	18	--	6.4	--
MAY 04, 1971	--	--	18	--	6.9	--	16	--	1.9	--
SEP 28, 1971	--	--	17	--	6.8	--	12	--	3.2	--
OCT 09, 1972	--	--	20	--	6.6	--	15	--	7.9	--
OCT 02, 1973	71	20	--	17	--	6.9	--	19	--	4.0
OCT 24, 1974	82	28	--	22	--	6.5	--	15	--	4.9
NOV 05, 1975	78	41	--	20	--	6.7	--	13	--	2.8
OCT 26, 1976	78	39	--	19	--	7.5	--	13	--	7.4
OCT 20, 1977	92	44	--	23	--	8.5	--	16	--	10
OCT 31, 1978	79	36	--	20	--	7.1	--	14	--	3.2
NOV 09, 1979	--	--	--	--	--	--	--	--	--	--
NOV 05, 1980	85	--	--	22	--	7.3	--	26	--	4.4

a/ Chester County Health Department Laboratory, Pennsylvania.  
 b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany,  
 c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.  
 d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

## 01472110 - STONY RUN AT SPRING CITY, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINTY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	38	18	--	--	--	--	--
MAY , 1970	--	--	--	42	13	--	--	--	141	--
SEP , 1970	--	--	--	17	23	--	--	--	192	--
MAY , 1971	--	--	--	33	15	--	--	--	137	--
SEP , 1971	--	--	--	30	14	--	--	--	164	--
OCT , 1972	--	--	--	34	23	--	--	--	163	--
OCT , 1973	62	0	51	23	16	.30	17	--	--	134
OCT , 1974	66	0	54	29	21	.10	15	175	--	150
NOV , 1975	45	0	37	27	16	<.10	15	153	--	120
OCT , 1976	48	0	39	35	21	.10	14	165	--	140
OCT , 1977	60	0	49	34	22	.10	16	180	--	160
OCT , 1978	53	0	43	25	19	.10	16	138	--	130
NOV , 1979	--	--	27	27	16	.10	16	--	--	--
NOV , 1980	--	--	--	35	43	.10	18	225	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
NOV , 1969	.32	--	--	--	--	--	--	--	--
FEB , 1970	1.3	--	--	--	--	--	--	--	--
MAY , 1970	2.7	--	--	--	--	--	--	--	--
SEP , 1970	1.9	.300	--	.130	--	--	--	.590	.500
MAY , 1971	5.5	.050	--	.300	.20	--	--	.250	.190
SEP , 1971	6.5	.030	--	.010	.96	--	--	.220	.080
OCT , 1972	3.6	.040	--	.080	.86	--	--	.480	.360
OCT , 1973	5.0	--	--	.100	.81	.91	--	.520	.520
OCT , 1974	4.1	--	--	.170	.58	.75	--	.440	.400
NOV , 1975	6.1	--	--	.130	.77	.90	--	.250	.220
OCT , 1976	2.6	.070	2.7	.300	1.2	1.5	4.2	.420	.230
OCT , 1977	1.1	.010	1.1	.080	.57	.65	1.8	.190	.090
OCT , 1978	4.0	.010	4.0	.020	.23	.25	4.3	.210	.180
NOV , 1979	--	--	--	--	--	--	--	.21	--
NOV , 1980	2.9	.020	2.9	.060	.42	.48	3.4	.210	.170

## 01472110 - STONY RUN AT SPRING CITY, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL, RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL, RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL, RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	--	--	--	--	--	--	--	--
SEP , 1970	--	<200	--	<500	--	<250	--	<250	--	--
MAY , 1971	--	<100	--	<900	--	<250	--	<100	--	--
SEP , 1971	--	<150	--	<200	--	<250	--	320	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1973	--	<100	--	<200	--	<250	--	1300	--	--
OCT , 1974	ND	--	<.00	--	ND	--	ND	250	--	2
NOV , 1975	<2	--	ND	--	ND	--	ND	--	60	<2
OCT , 1976	<2	--	ND	--	ND	--	ND	--	40	3
OCT , 1977	<2	--	<20	--	ND	--	<20	--	180	4
OCT , 1978	ND	--	<2	--	ND	--	6	--	130	8
NOV , 1979	ND	--	ND	--	ND	--	2	--	190	<2
NOV , 1980	--	20	--	--	--	0	--	--	--	--
05...	1	--	.00	--	0	--	2	--	80	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL, RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL, RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	25	.48
MAY , 1970	--	--	--	--	--	--	--	--	9	.23
SEP , 1970	<100	--	--	<250	--	<250	--	--	8	.20
MAY , 1971	<50	--	--	<250	--	<20	--	--	15	.09
SEP , 1971	<50	<250	--	<250	--	<20	--	--	13	.13
OCT , 1972	<50	<250	--	<250	--	<20	--	--	--	--
OCT , 1973	<50	<250	--	<250	--	<20	--	--	--	--
OCT , 1974	--	40	--	--	<2	--	20	--	--	--
NOV , 1975	--	--	50	--	4	--	<20	--	--	--
OCT , 1976	--	--	30	--	3	--	20	--	--	--
OCT , 1977	--	--	130	--	2	--	<20	--	--	--
OCT , 1978	--	--	110	--	2	--	20	.10	--	--
NOV , 1979	--	--	40	--	2	--	ND	.00	--	--
NOV , 1980	--	--	--	--	--	190	--	--	--	--
05...	--	--	90	--	2	--	8	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472126 - FRENCH CREEK AT TRYTHALL, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sub>d</sub>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, (COLS. PER 100 ML)
MAY , 1971	--	84215 <sub>a</sub> /	--	75	7.5	50.0	12.8	3200	280	300
OCT 10...	--	84215	--	70	7.5	16.0	--	15800	650	2300
OCT 25...	--	84215	--	55	6.9	14.0	--	2400	280	720
OCT , 1972	1315	84215	--	80	6.3	17.5	10.6	8300	310	100
OCT , 1973	1035	1028 <sub>b</sub> /	--	45	8.4	11.0	--	--	--	--
OCT , 1974	1400	1028	--	60	7.1	13.0	9.2	--	--	--
OCT , 1975	1400	1028	--	100	7.0	7.0	11.4	--	--	--
OCT , 1976	1045	1028	--	70	6.9	13.5	10.1	--	--	--
OCT , 1977	1300	80010 <sub>c</sub> /	--	85	6.9	--	11.6	--	--	--
NOV , 1978	1500	80010	--	55	6.9	8.0	11.8	--	--	--
NOV , 1979	1315	80010	--	85	7.1	7.0	10.5	--	--	--
NOV , 1980	0830	80010	--							

DATE	HARD- NESS (MG/L AS CaCO <sub>3</sub> )	HARD- NESS NONCAR- BONATE (MG/L CaCO <sub>3</sub> )	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY , 1971	--	--	5.8	--	2.5	--	3.3	--	1.1	--
OCT 10...	--	--	5.3	--	1.9	--	2.9	--	1.2	--
OCT 25...	--	--	3.9	--	1.4	--	2.4	--	1.0	--
OCT , 1972	--	--								
OCT , 1973	24	4	--	6.0	--	2.2	--	3.5	--	1.0
OCT , 1974	25	4	--	6.5	--	2.2	--	2.8	--	.70
OCT , 1975	18	2	--	5.5	--	1.0	--	2.5	--	.90
OCT , 1976	26	9	--	6.3	--	2.5	--	3.2	--	1.6
OCT , 1977	25	6	--	6.8	--	2.0	--	3.4	--	1.1
NOV , 1978	24	3	--	6.4	--	2.0	--	4.3	--	1.5
NOV , 1979	--	--	--	--	--	--	--	--	--	--
NOV , 1980	24	--	--	6.4	--	2.0	--	3.5	--	.90

a/ Chester County Health Department Laboratory, Pennsylvania.  
 b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.  
 c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.  
 d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).



TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25 Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472126 - FRENCH CREEK AT TRYTHALL, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
MAY , 1971										
10...	--	--	--	14	4.6	--	--	--	--	--
OCT 23...	--	--	--	18	3.2	--	--	--	--	--
OCT , 1972										
24...	--	--	--	6.0	1.5	--	--	--	46	--
OCT , 1973										
03...	24	0	20	6.4	2.7	.20	8.7	--	--	43
OCT , 1974										
24...	25	0	21	6.7	2.3	.10	9.9	56	--	44
OCT , 1975										
30...	19	0	16	7.1	2.7	<.10	8.6	52	--	38
OCT , 1976										
27...	21	0	17	15	4.8	.10	11	55	--	55
OCT , 1977										
21...	23	0	19	7.6	1.8	<.10	9.1	51	--	43
NOV , 1978										
01...	25	0	21	6.5	4.2	.10	9.1	56	--	47
NOV , 1979										
08...	--	--	13	6.8	2.6	.10	8.6	--	--	--
NOV , 1980										
07...	--	--	--	6.4	2.3	.10	7.9	47	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
MAY , 1971									
10...	.11	<.010	--	<.010	.34	--	--	.490	.010
OCT 25...	.09	<.010	--	<.010	.71	--	--	.070	.010
OCT , 1972									
24...	.08	.010	--	.020	.27	--	--	.150	.010
OCT , 1973									
03...	.24	.005	.24	.050	.26	.31	.55	.030	.010
OCT , 1974									
24...	.11	--	--	.020	.20	.22	--	.020	.010
OCT , 1975									
30...	.11	--	--	.010	.21	.22	--	.030	<.010
OCT , 1976									
27...	.28	.010	.29	.100	.30	.40	.69	.030	.010
OCT , 1977									
21...	.19	<.010	.19	.040	.53	.57	.76	.020	<.010
NOV , 1978									
01...	.09	<.010	.09	.030	.19	.22	.31	.010	<.010
NOV , 1979									
08...	--	--	--	--	--	--	--	.030	--
NOV , 1980									
07...	.09	.000	.09	.050	.03	.08	.17	.020	.020

## 01472126 - FRENCH CREEK AT TRYTHALL, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
MAY , 1971										
10...	--	<150	--	<200	--	<250	--	500	--	--
OCT 25...	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1972										
24...	--	<100	--	<200	--	<250	--	860	--	--
OCT , 1973										
03...	ND	--	ND	--	ND	--	ND	--	180	3
OCT , 1974										
24...	ND	--	ND	--	ND	--	ND	--	180	2
OCT , 1975										
30...	<2	--	ND	--	ND	--	ND	--	190	10
OCT , 1976										
27...	2	--	<20	--	ND	--	<20	--	220	5
OCT , 1977										
21...	ND	--	ND	--	ND	--	2	--	240	ND
NOV , 1978										
01...	<2	--	ND	--	ND	--	4	--	290	8
NOV , 1979										
08...	--	20	--	--	--	0	--	--	--	--
NOV , 1980										
07...	1	--	1	--	0	--	2	--	90	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
MAY , 1971										
10...	<50	<250	--	<250	--	<20	--	--	--	--
OCT 25...	<50	<250	--	<250	--	<50	--	--	--	--
OCT , 1972										
24...	<50	370	--	<250	--	<20	--	--	--	--
OCT , 1973										
03...	--	--	70	--	3	--	<20	--	--	--
OCT , 1974										
24...	--	--	80	--	ND	--	<20	--	--	--
OCT , 1975										
30...	--	--	60	--	<2	--	<20	--	--	--
OCT , 1976										
27...	--	--	40	--	5	--	<20	--	--	--
OCT , 1977										
21...	--	--	70	--	<2	--	<20	.00	--	--
NOV , 1978										
01...	--	--	80	--	<2	--	30	.00	--	--
NOV , 1979										
08...	--	--	--	--	--	140	--	--	--	--
NOV , 1980										
07...	--	--	70	--	0	--	9	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472129 - FRENCH CREEK NEAR KNAUERTOWN, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sub>d</sub>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
DEC , 1969										
09...	--	84215 <sub>a</sub> /	9.7	95	6.9	5.0	--	2800	--	1300
FEB , 1970										
24...	--	84215	16	35	7.6	3.0	--	1900	--	1200
MAY , 1971										
07...	--	84215	17	103	8.1	12.0	--	96	--	12
OCT , 1971										
05...	--	84215	5.6	50	7.8	9.0	--	1600	--	210
MAY , 1971										
10...	--	84215	15	80	7.2	11.0	--	4500	380	590
OCT , 1971										
04...	--	84215	11	85	7.6	17.0	--	13600	300	800
OCT , 1972										
30...	0730	84215	12	75	6.0	9.5	--	1300	160	220
OCT , 1973										
03...	1205	1028 <sub>b</sub> /	--	95	6.6	17.5	10.4	9700	340	270
OCT , 1974										
24...	1430	1028	--	55	8.2	9.0	10.1	--	--	--
NOV , 1975										
10...	1500	1028	--	95	7.1	16.0	10.2	--	--	--
OCT , 1976										
27...	1200	1028	--	70	7.1	8.0	10.4	--	--	--
OCT , 1977										
21...	1200	80010 <sub>c</sub> /	--	90	6.8	12.0	10.5	--	--	--
NOV , 1978										
01...	1420	80010	--	95	7.0	10.5	13.2	--	--	--
NOV , 1979										
08...	1230	80010	--	79	6.6	7.0	12.2	--	--	--
NOV , 1980										
06...	1530	80010	--	95	7.2	6.0	11.8	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
DEC , 1969										
09...	--	--	--	--	--	--	--	--	--	--
FEB , 1970										
24...	--	--	--	--	--	--	--	--	--	--
MAY , 1971										
07...	--	--	4.8	--	2.2	--	3.0	--	1.3	--
OCT , 1971										
05...	--	--	9.0	--	2.5	--	3.5	--	1.5	--
MAY , 1971										
10...	--	--	5.7	--	1.7	--	3.1	--	1.0	--
OCT , 1971										
04...	--	--	13	--	6.2	--	6.8	--	4.5	--
OCT , 1972										
30...	--	--	5.5	--	1.9	--	2.7	--	1.3	--
OCT , 1973										
03...	32	7	--	8.0	--	2.8	--	3.5	--	1.6
OCT , 1974										
24...	38	11	--	10	--	3.1	--	3.0	--	1.0
NOV , 1975										
10...	31	6	--	8.9	--	2.1	--	3.1	--	1.7
OCT , 1976										
27...	22	6	--	5.4	--	2.0	--	3.0	--	1.0
OCT , 1977										
21...	35	12	--	9.4	--	2.7	--	3.7	--	1.4
NOV , 1978										
01...	--	--	--	--	--	--	--	--	--	--
NOV , 1979										
08...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
06...	34	--	--	8.9	--	2.9	--	3.7	--	1.2

a/ Chester County Health Department Laboratory, Pennsylvania.

b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

## 01472129 - FRENCH CREEK NEAR KNAUERTOWN, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
DEC , 1969										
09...	--	--	--	16	9.0	--	--	--	--	--
FEB , 1970										
24...	--	--	--	6.6	6.2	--	--	--	--	--
MAY , 1970										
07...	--	--	--	19	1.1	--	--	--	69	--
OCT , 1970										
05...	--	--	--	7.1	3.5	--	--	--	63	--
MAY , 1971										
10...	--	--	--	9.9	4.6	--	--	--	33	--
OCT , 1971										
04...	--	--	--	8.2	3.8	--	--	--	59	--
OCT , 1972										
30...	--	--	--	5.5	4.1	--	--	--	63	--
OCT , 1973										
03...	30	0	25	7.7	3.5	.60	13	--	--	55
OCT , 1974										
24...	33	0	27	9.1	3.7	.20	12	55	--	59
NOV , 1975										
10...	30	0	25	7.3	4.2	.10	11	62	--	54
OCT , 1976										
27...	20	0	16	13	3.2	.10	9.1	45	--	47
OCT , 1977										
21...	28	0	23	11	3.3	<.10	13	68	--	59
NOV , 1978										
01...	17	0	14	8.1	4.0	0.1	12	52	--	--
NOV , 1979										
08...	--	--	18	7.1	4.1	.10	13	--	--	--
NOV , 1980										
06...	--	--	--	12	4.3	.10	12	67	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
DEC , 1969									
09...	.27	--	--	--	--	--	--	--	--
FEB , 1970									
24...	.10	--	--	--	--	--	--	--	--
MAY , 1970									
07...	.39	--	--	--	--	--	--	--	--
OCT , 1970									
05...	.49	<.010	--	--	.01	--	--	<.010	.010
MAY , 1971									
10...	--	<.010	--	.110	.27	--	--	.030	.020
OCT , 1971									
04...	.36	<.010	--	.060	.31	--	--	.040	.010
OCT , 1972									
30...	.05	<.010	--	.050	.18	--	--	.030	.000
OCT , 1973									
03...	.43	.001	.43	.100	.60	.70	1.1	.030	.010
OCT , 1974									
24...	.25	--	--	.030	.26	.29	--	.030	.010
NOV , 1975									
10...	.52	--	--	.010	.44	.45	--	.050	.010
OCT , 1976									
27...	.11	.010	.12	.040	.21	.25	.37	.030	<.010
OCT , 1977									
21...	.45	<.010	.45	.030	.36	.39	.84	.020	<.010
NOV , 1978									
01...	.09	.00	.09	.01	.47	.48	.57	.01	.02
NOV , 1979									
08...	--	--	--	--	--	--	--	.010	--
NOV , 1980									
06...	.22	.000	.22	.040	.18	.22	.44	.020	.020

## 01472129 - FRENCH CREEK NEAR KNAUERTOWN, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL, RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL, RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL, RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
DEC , 1969	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
MAY...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
OCT...	--	--	--	--	--	--	--	--	--	--
05...	--	<100	--	<900	--	<250	--	<100	--	--
MAY , 1971	--	<150	--	<200	--	<250	--	<330	--	--
10...	--	<100	--	<200	--	<250	--	1000	--	--
OCT...	--	<100	--	<200	--	<250	--	<410	--	--
04...	--	<100	--	<200	--	<250	--	1000	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	<410	--	--
30...	--	<100	--	<200	--	<250	--	<410	--	--
OCT , 1973	ND	--	ND	--	ND	--	<20	360	--	ND
03...	ND	--	ND	--	ND	--	<20	360	--	ND
OCT , 1974	ND	--	ND	--	ND	--	ND	--	160	2
24...	ND	--	ND	--	ND	--	ND	--	160	2
NOV , 1975	<2	--	ND	--	ND	--	ND	--	250	3
10...	<2	--	ND	--	ND	--	ND	--	250	3
OCT , 1976	<2	--	<20	--	ND	--	ND	--	210	5
27...	<2	--	<20	--	ND	--	ND	--	210	5
OCT , 1977	ND	--	ND	--	ND	--	2	--	200	<2
21...	ND	--	ND	--	ND	--	2	--	200	<2
NOV , 1978	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
NOV , 1979	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
NOV , 1980	--	--	--	--	--	--	--	--	--	--
06...	0	--	.00	--	1	--	1	--	150	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL, RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL, RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
DEC , 1969	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
MAY...	--	--	--	--	--	--	--	--	2	.09
07...	--	--	--	--	--	--	--	--	2	.09
OCT...	--	--	--	--	--	--	--	--	3	.05
05...	<50	<250	--	<250	--	<20	--	--	3	.05
MAY , 1971	<50	<250	--	<250	--	<20	--	--	7	.28
10...	<50	<250	--	<250	--	<20	--	--	7	.28
OCT...	<50	<250	--	<250	--	<50	--	--	4	.12
04...	<50	<250	--	<250	--	<50	--	--	4	.12
OCT , 1972	<50	<250	--	<250	--	<20	--	--	8	.26
30...	<50	<250	--	<250	--	<20	--	--	8	.26
OCT , 1973	--	70	--	--	ND	--	<20	--	--	--
03...	--	70	--	--	ND	--	<20	--	--	--
OCT , 1974	--	--	60	--	<2	--	40	--	--	--
24...	--	--	60	--	<2	--	40	--	--	--
NOV , 1975	--	--	130	--	6	--	<20	--	--	--
10...	--	--	130	--	6	--	<20	--	--	--
OCT , 1976	--	--	70	--	4	--	<20	--	--	--
27...	--	--	70	--	4	--	<20	--	--	--
OCT , 1977	--	--	70	--	<2	--	<20	.00	--	--
21...	--	--	70	--	<2	--	<20	.00	--	--
NOV , 1978	--	--	--	--	--	--	--	.00	--	--
01...	--	--	--	--	--	--	--	.00	--	--
NOV , 1979	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
NOV , 1980	--	--	--	--	--	--	--	--	--	--
06...	--	--	70	--	0	--	2	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, micromhos per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472138 - FRENCH CREEK NEAR COVENTRYVILLE, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sub>d</sub> /	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
DEC , 1969	--									
09...	--	84215 <sub>a</sub> /	24	120	7.0	5.0	--	1700	--	1500
FEB , 1970	--	84215	28	60	7.4	6.0	--	1300	--	940
24...	--									
MAY , 1970	--	84215	30	70	8.0	16.0	--	73000	--	84
20...	--									
OCT , 1970	--	84215	11	60	7.2	9.0	--	1200	--	250
05...	--									
MAY , 1971	--	84215	30	105	7.0	12.0	--	7200	580	250
10...	--									
OCT , 1971	--	84215	23	115	7.6	18.0	--	26000	190	1800
04...	--									
OCT , 1972	0830	84215	18	102	7.1	9.5	--	1600	180	300
30...										
OCT , 1973	1050	1028 <sub>b</sub> /	--	140	6.2	16.5	11.6	11300	--	270
04...										
OCT , 1974	1515	1028	--	100	7.8	10.0	11.0	--	--	--
24...										
NOV , 1975	1100	1028	--	140	7.2	13.0	11.2	--	--	--
04...										
OCT , 1976	0830	1028	--	120	7.2	8.0	11.4	--	--	--
27...										
OCT , 1977	0930	80010 <sub>c</sub> /	--	130	6.9	10.5	10.5	--	--	--
21...										
NOV , 1978	1115	80010	--	180	7.2	9.5	10.6	--	--	--
01...										
NOV , 1979	0900	80010	--	110	6.5	8.0	11.2	--	--	--
09...										
NOV , 1980	1300	80010	--	160	7.4	6.0	12.6	--	--	--
06...										

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
DEC , 1969	--	--	--	--	--	--	--	--	--	--
09...										
FEB , 1970	--	--	10	--	2.9	--	7.4	--	.9	--
24...										
MAY , 1970	--	--	7.6	--	3.5	--	9.7	--	.9	--
20...										
OCT , 1970	--	--	9.0	--	2.5	--	3.0	--	1.2	--
05...										
MAY , 1971	--	--	8.3	--	3.6	--	3.9	--	1.0	--
10...										
OCT , 1971	--	--	12	--	3.9	--	6.5	--	1.5	--
04...										
OCT , 1972	--	--	12	--	6.2	--	3.4	--	2.0	--
30...										
OCT , 1973	47	11	--	11	--	4.7	--	5.2	--	1.4
04...										
OCT , 1974	55	19	--	17	--	3.0	--	6.3	--	1.7
24...										
NOV , 1975	49	16	--	13	--	4.0	--	4.4	--	1.3
04...										
OCT , 1976	40	13	--	9.6	--	4.0	--	3.8	--	2.0
27...										
OCT , 1977	51	22	--	13	--	4.4	--	5.0	--	1.7
21...										
NOV , 1978	53	17	--	13	--	4.9	--	5.5	--	1.7
01...										
NOV , 1979	--	--	--	--	--	--	--	--	--	--
09...										
NOV , 1980	52	--	--	13	--	4.7	--	5.0	--	1.4
06...										

a/ Chester County Health Department Laboratory, Pennsylvania.  
 b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.  
 c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.  
 d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472138 - FRENCH CREEK NEAR COVENTRYVILLE, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	RESIDUE AT 105 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
DEC , 1969										
09...	--	--	--	15	5.0	--	--	--	--	--
FEB , 1970										
24...	--	--	--	7.7	11	--	--	--	--	--
MAY , 1970										
20...	--	--	--	15	7.0	--	--	--	77	--
OCT , 1970										
05...	--	--	--	9.9	9.5	--	--	--	77	--
MAY , 1971										
10...	--	--	--	16	3.6	--	--	--	60	--
OCT , 1971										
04...	--	--	--	7.4	7.6	--	--	--	93	--
OCT , 1972										
30...	--	--	--	8.5	6.6	--	--	--	82	--
OCT , 1973										
04...	44	0	36	11	8.5	.30	16	--	--	80
OCT , 1974										
24...	44	0	36	14	10	.20	19	108	--	93
NOV , 1975										
04...	40	0	33	10	7.0	.10	14	81	--	74
OCT , 1976										
27...	33	0	27	17	6.7	.10	14	82	--	74
OCT , 1977										
21...	35	0	29	15	6.9	<.10	16	92	--	79
NOV , 1978										
01...	44	0	36	11	8.0	.10	15	87	--	81
NOV , 1979										
09...	--	--	24	10	6.6	.10	15	--	--	--
NOV , 1980										
06...	--	--	--	16	9.6	.10	17	92	--	--
DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	
DEC , 1969										
09...	.14	--	--	--	--	--	--	--	--	
FEB , 1970										
24...	.13	--	--	--	--	--	--	--	--	
MAY , 1970										
20...	--	--	--	--	--	--	--	--	--	
OCT , 1970										
05...	.68	--	--	--	--	--	--	.020	.030	
MAY , 1971										
10...	.36	.010	--	--	.05	--	--	.030	.010	
OCT , 1971										
04...	.72	<.010	--	.020	.24	--	--	.060	.020	
OCT , 1972										
30...	.08	<.010	--	.020	.31	--	--	.040	.010	
OCT , 1973										
04...	.57	.002	.57	.150	.17	.32	.89	.020	.010	
OCT , 1974										
24...	.50	--	--	--	--	--	--	.030	.020	
NOV , 1975										
04...	.68	--	--	.010	.32	.33	--	.020	<.010	
OCT , 1976										
27...	.35	.010	.36	.040	.26	.30	.66	.040	.010	
OCT , 1977										
21...	.54	.010	.55	<.010	.17	.17	.72	.010	<.010	
NOV , 1978										
01...	.57	.010	.58	.010	.29	.30	.88	.010	.010	
NOV , 1979										
09...	--	--	--	--	--	--	--	.220	--	
NOV , 1980										
06...	.35	.000	.35	.040	.09	.13	.48	.030	.010	

## 01472138 - FRENCH CREEK NEAR COVENTRYVILLE, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
DEC , 1969	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	<100	--	<200	--	--	--	<250	--	--
24...	--	--	--	--	--	--	--	--	--	--
MAY , 1971	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
OCT , 1971	--	<100	--	<900	--	<250	--	<100	--	--
05...	--	--	--	--	--	--	--	--	--	--
MAY , 1971	--	<150	--	<200	--	<250	--	340	--	--
10...	--	--	--	--	--	--	--	--	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	<150	--	--
04...	--	--	--	--	--	--	--	--	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	430	--	--
30...	--	--	--	--	--	--	--	--	--	--
OCT , 1973	ND	--	ND	--	ND	--	<20	180	--	2
04...	--	--	--	--	--	--	--	--	--	--
OCT , 1974	ND	--	ND	--	ND	--	ND	--	130	2
24...	--	--	--	--	--	--	--	--	--	--
NOV , 1975	<2	--	ND	--	ND	--	ND	--	190	6
04...	--	--	--	--	--	--	--	--	--	--
OCT , 1976	<2	--	<20	--	ND	--	<20	--	240	4
27...	--	--	--	--	--	--	--	--	--	--
OCT , 1977	ND	--	ND	--	ND	--	2	--	200	4
21...	--	--	--	--	--	--	--	--	--	--
NOV , 1978	ND	--	ND	--	ND	--	ND	--	120	3
01...	--	--	--	--	--	--	--	--	--	--
NOV , 1979	--	20	--	--	--	0	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
NOV , 1980	1	--	.00	--	1	--	1	--	120	0
06...	--	--	--	--	--	--	--	--	--	--

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
DEC , 1969	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
MAY , 1971	--	--	--	--	--	--	--	--	6	.49
20...	--	--	--	--	--	--	--	--	--	--
OCT , 1971	<50	<250	--	<250	--	<20	--	--	1	.03
05...	--	--	--	--	--	--	--	--	--	--
MAY , 1971	<50	<250	--	<250	--	<20	--	--	7	.57
10...	--	--	--	--	--	--	--	--	--	--
OCT , 1972	<50	<250	--	<250	--	<50	--	--	2	.12
04...	--	--	--	--	--	--	--	--	--	--
OCT , 1972	<50	<250	--	<250	--	<20	--	--	6	.30
30...	--	--	--	--	--	--	--	--	--	--
OCT , 1973	--	20	--	--	ND	--	<20	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
OCT , 1974	--	--	40	--	<2	--	<20	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
NOV , 1975	--	--	30	--	2	--	<20	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
OCT , 1976	--	--	20	--	6	--	<20	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
OCT , 1977	--	--	40	--	<2	--	<20	.00	--	--
21...	--	--	--	--	--	--	--	--	--	--
NOV , 1978	--	--	40	--	ND	--	<20	.00	--	--
01...	--	--	--	--	--	--	--	--	--	--
NOV , 1979	--	--	--	--	--	160	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
NOV , 1980	--	--	40	--	0	--	3	.00	--	--
06...	--	--	--	--	--	--	--	--	--	--



TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472140 - SOUTH BRIDGE FRENCH CREEK COVENTRYVILLE, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sub>d</sub> /	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
DEC , 1969										
09...	--	84215 <sup>a</sup> /	13	175	6.9	4.0	--	1300	--	150
FEB , 1970										
24...	--	84215	16	90	7.8	6.0	--	1600	--	300
MAY										
07...	--	84215	16	106	8.8	13.0	--	<1	--	8
OCT										
05...	--	84215	5.8	45	7.4	11.0	--	1900	--	420
MAY , 1971										
10...	--	84215	16	145	7.4	12.0	--	3900	480	180
OCT										
04...	--	84215	12	140	7.8	17.0	--	7000	180	360
OCT , 1972										
30...	0915	84215	9.6	150	7.3	9.0	--	2700	440	820
OCT , 1973										
03...	1245	1028 <sup>b</sup> /	--	175	7.5	18.0	13.0	9700	290	290
OCT , 1974										
25...	0900	1028	--	149	7.4	5.5	10.8	--	--	--
NOV , 1975										
04...	1015	1028	--	190	7.0	13.0	11.9	--	--	--
OCT , 1977										
21...	1030	80010 <sup>c</sup> /	--	180	7.1	12.0	11.4	--	--	--
NOV , 1978										
01...	1215	80010	--	180	7.0	9.5	13.8	--	--	--
NOV , 1979										
09...	0830	80010	--	158	6.0	8.5	11.2	--	--	--
NOV , 1980										
06...	1400	80010	--	180	7.5	7.5	13.0	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
DEC , 1969										
09...	--	--	--	--	--	--	--	--	--	--
FEB , 1970										
24...	--	--	--	--	--	--	--	--	--	--
MAY										
07...	--	--	10	--	4.4	--	6.2	--	1.9	--
OCT										
05...	--	--	12	--	4.5	--	6.9	--	2.3	--
MAY , 1971										
10...	--	--	12	--	4.6	--	6.7	--	1.8	--
OCT										
04...	--	--	12	--	5.6	--	6.2	--	4.3	--
OCT , 1972										
30...	--	--	13	--	5.2	--	6.4	--	3.2	--
OCT , 1973										
03...	56	19	--	14	--	5.0	--	6.7	--	2.0
OCT , 1974										
25...	53	38	--	13	--	5.0	--	4.5	--	1.2
NOV , 1975										
04...	63	29	--	17	--	5.0	--	6.3	--	1.8
OCT , 1977										
21...	65	32	--	17	--	5.5	--	7.4	--	2.3
NOV , 1978										
01...	65	30	--	17	--	5.4	--	7.8	--	2.4
NOV , 1979										
09...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
06...	61	--	--	16	--	5.2	--	7.5	--	2.1

<sup>a</sup>/ Chester County Health Department Laboratory, Pennsylvania.  
<sup>b</sup>/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.  
<sup>c</sup>/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.  
<sup>d</sup>/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

## 01472140 - SOUTH BRIDGE FRENCH CREEK AT COVENTRYVILLE, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
DEC , 1969										
09...	--	--	--	13	10	--	--	--	--	--
FEB , 1970										
24...	--	--	--	7.7	11	--	--	--	--	--
MAY										
07...	--	--	--	27	6.4	--	--	--	115	--
OCT										
05...	--	--	--	7.7	1.0	--	--	--	112	--
MAY , 1971										
10...	--	--	--	18	8.2	--	--	--	72	--
OCT										
04...	--	--	--	10	11	--	--	--	111	--
OCT , 1972										
30...	--	--	--	13	12	--	--	--	121	--
OCT , 1973										
03...	45	0	37	13	9.4	.30	20	--	--	93
OCT , 1974										
25...	17	0	15	12	7.6	.10	15	92	--	67
NOV , 1975										
04...	42	0	34	14	11	.20	18	110	--	94
OCT , 1977										
21...	40	0	33	17	15	.10	20	127	--	100
NOV , 1978										
01...	43	0	35	14	11	.10	18	113	--	97
NOV , 1979										
09...	--	--	27	17	11	.10	18	--	--	--
NOV , 1980										
06...	--	--	--	19	12	.10	22	115	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
DEC , 1969									
09...	.14	--	--	--	--	--	--	--	.030
FEB , 1970									
24...	.39	--	--	--	--	--	--	--	<.010
MAY									
07...	.65	--	--	--	--	--	--	--	.060
OCT									
05...	1.8	--	--	--	--	--	--	.030	.030
MAY , 1971									
10...	2.1	.020	--	.050	.28	--	--	.070	.030
OCT									
04...	2.2	<.010	--	.010	.49	--	--	.090	.040
OCT , 1972									
30...	2.1	<.010	--	.010	.28	--	--	.050	.030
OCT , 1973									
03...	2.2	<.010	2.2	.070	.51	.58	2.8	.030	.020
OCT , 1974									
25...	2.7	--	--	.020	.23	.25	--	.020	.010
NOV , 1975									
04...	2.9	--	--	<.010	.59	.59	--	.020	.010
OCT , 1977									
21...	2.7	.010	2.7	<.010	.24	.24	2.9	.030	.010
NOV , 1978									
01...	2.9	.010	2.9	.010	.32	.33	3.2	.010	.010
NOV , 1979									
09...	--	--	3.8	.030	.26	.29	4.1	.400	--
NOV , 1980									
06...	2.5	.000	2.5	.040	.10	.14	2.6	.020	.010

## 01472140 - SOUTH BRIDGE FRENCH CREEK AT COVENTRYVILLE, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
DEC , 1969	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
MAY , 1971	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
OCT , 1971	--	<100	--	<900	--	<250	--	<100	--	--
05...	--	<150	--	<200	--	<250	--	630	--	--
MAY , 1971	--	<150	--	<200	--	<250	--	630	--	--
10...	--	<100	--	<200	--	<250	--	1700	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	510	--	--
04...	--	<100	--	<200	--	<250	--	510	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	510	--	--
30...	--	<100	--	<200	--	<250	--	510	--	--
OCT , 1973	ND	--	ND	--	3	--	<20	280	--	<2
03...	ND	--	ND	--	ND	--	ND	--	140	2
OCT , 1974	ND	--	ND	--	ND	--	ND	--	100	4
25...	<2	--	ND	--	ND	--	ND	--	160	6
NOV , 1975	<2	--	ND	--	ND	--	2	--	70	<2
04...	<2	--	ND	--	ND	--	<2	--	--	--
OCT , 1977	<2	--	ND	--	ND	--	<2	--	--	--
21...	<2	--	ND	--	ND	--	<2	--	--	--
NOV , 1978	<2	--	ND	--	ND	--	<2	--	--	--
01...	<2	--	ND	--	ND	--	<2	--	--	--
NOV , 1979	<2	--	ND	--	ND	--	<2	--	--	--
09...	<2	--	ND	--	ND	--	<2	--	--	--
NOV , 1980	<2	--	ND	--	ND	--	<2	--	--	--
06...	2	--	1	--	1	--	0	--	90	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
DEC , 1969	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
MAY , 1971	--	--	--	--	--	--	--	--	4	.18
07...	--	--	--	--	--	--	--	--	1	.02
OCT , 1971	<50	<250	--	<250	--	<20	--	--	6	.26
05...	<50	<250	--	<250	--	<20	--	--	2	.06
MAY , 1971	<50	<250	--	<250	--	<20	--	--	4	.10
10...	<50	<250	--	<250	--	<20	--	--	--	--
OCT , 1972	<50	<250	--	<250	--	<20	--	--	--	--
04...	<50	<250	--	<250	--	<20	--	--	--	--
OCT , 1972	<50	<250	--	<250	--	<20	--	--	--	--
30...	<50	<250	--	<250	--	<20	--	--	--	--
OCT , 1973	--	<10	--	--	ND	--	<20	--	--	--
03...	--	--	50	--	4	--	<20	--	--	--
OCT , 1974	--	--	30	--	2	--	<20	--	--	--
25...	--	--	30	--	<2	--	<20	.00	--	--
NOV , 1975	--	--	40	--	ND	--	ND	.00	--	--
04...	--	--	--	--	--	10	--	--	--	--
OCT , 1977	--	--	--	--	--	10	--	--	--	--
21...	--	--	20	--	0	--	0	.00	--	--
NOV , 1978	--	--	20	--	0	--	0	.00	--	--
01...	--	--	20	--	0	--	0	.00	--	--
NOV , 1979	--	--	20	--	0	--	0	.00	--	--
09...	--	--	20	--	0	--	0	.00	--	--
NOV , 1980	--	--	20	--	0	--	0	.00	--	--
06...	--	--	20	--	0	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472154 - FRENCH CREEK NEAR PUGHTOWN, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sub>d</sub>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	
DEC , 1969	--	84215 <sub>a</sub> /	37	125	7.0	5.0	--	3200	--	2600	
FEB , 1970	--	84215	42	70	7.6	5.0	--	2700	--	2400	
MAY , 1970	--	84215	42	55	7.7	16.0	--	10	--	<1	
OCT , 1970	--	84215	22	40	7.6	11.0	--	6600	--	180	
MAY , 1971	--	84215	61	120	7.3	13.0	--	6500	300	90	
OCT , 1971	--	84215	46	135	8.1	18.0	--	51000	580	920	
OCT , 1972	1200	84215	37	122	7.1	11.0	--	3100	700	1400	
OCT , 1973	1115	1028 <sub>b</sub> /	--	153	6.4	17.5	11.8	9300	--	100	
OCT , 1974	0945	1028	--	150	7.3	6.0	10.1	--	--	--	
NOV , 1975	1230	1028	--	150	7.6	13.5	11.2	--	--	--	
OCT , 1976	1400	1028	--	140	7.3	8.0	11.9	--	--	--	
OCT , 1977	1500	80010 <sub>c</sub> /	--	160	6.8	13.0	11.2	--	--	--	
NOV , 1978	1000	80010	--	200	7.2	9.5	9.0	--	--	--	
NOV , 1979	1000	80010	--	127	6.1	8.5	11.4	--	--	--	
NOV , 1980	1030	80010	--	155	7.1	5.0	11.8	--	--	--	
DATE		HARD- NESS (MG/L AS CaCO3)	HARD- NESS NONCAR- BONATE (MG/L CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL, RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
DEC , 1969	--	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	12	--	3.4	--	6.8	--	1.2	--
MAY , 1970	--	--	--	9.2	--	3.7	--	5.3	--	1.2	--
OCT , 1970	--	--	--	15	--	4.0	--	8.3	--	2.0	--
MAY , 1971	--	--	--	12	--	3.9	--	5.5	--	1.2	--
OCT , 1971	--	--	--	12	--	3.9	--	6.5	--	2.0	--
OCT , 1972	--	--	--	11	--	3.8	--	5.2	--	3.0	--
OCT , 1973	51	15	--	13	--	4.6	--	6.5	--	1.8	--
OCT , 1974	56	23	--	15	--	4.6	--	6.3	--	1.6	--
NOV , 1975	51	19	--	14	--	4.0	--	5.7	--	1.6	--
OCT , 1976	46	14	--	11	--	4.4	--	5.6	--	2.5	--
OCT , 1977	57	23	--	15	--	4.8	--	6.8	--	2.2	--
NOV , 1978	55	19	--	14	--	4.8	--	6.8	--	2.1	--
NOV , 1979	--	--	--	--	--	--	--	--	--	--	--
NOV , 1980	53	--	--	14	--	4.5	--	6.1	--	1.8	--

a/ Chester County Health Department Laboratory, Pennsylvania.  
 b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.  
 c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.  
 d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472154 - FRENCH CREEK NEAR PUGHTOWN, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
DEC 10, 1969	--	--	--	--	--	--	--	--	--	--
FEB 24, 1970	--	--	--	13	13	--	--	--	85	--
MAY 20, 1970	--	--	--	14	9.0	--	--	--	89	--
OCT 05, 1970	--	--	--	6.9	7.0	--	--	--	90	--
MAY 10, 1971	--	--	--	18	6.4	--	--	--	78	--
OCT 04, 1971	--	--	--	.6	6.6	--	--	--	98	--
OCT 30, 1972	--	--	--	14	9.7	--	--	--	111	--
OCT 04, 1973	44	0	36	12	8.3	.30	17	--	--	85
OCT 25, 1974	40	0	33	15	9.4	.10	16	99	--	88
NOV 04, 1975	40	0	33	13	8.6	.10	15	95	--	82
OCT 27, 1976	39	0	32	18	9.5	.10	16	94	--	87
OCT 21, 1977	42	0	34	17	9.1	<.10	17	109	--	93
NOV 01, 1978	44	0	36	15	9.6	.10	16	94	--	90
NOV 09, 1979	--	--	24	13	8.2	.10	45	--	--	--
NOV 06, 1980	--	--	--	16	9.2	.10	18	96	--	--

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
DEC 10, 1969	.20	--	--	--	--	--	--	--	<.010
FEB 24, 1970	.32	--	--	--	--	--	--	--	--
MAY 20, 1970	.27	--	--	--	--	--	--	--	.010
OCT 05, 1970	.93	<.010	--	--	.02	--	--	.060	.030
MAY 10, 1971	.50	.010	--	.570	.36	--	--	.050	.010
OCT 04, 1972	1.3	<.010	--	.010	.58	--	--	.080	.010
OCT 30, 1973	.33	<.010	--	.060	.25	--	--	.060	.010
OCT 04, 1974	1.1	.001	1.1	.070	.36	.43	1.5	.020	.020
OCT 25, 1975	1.2	--	--	.040	.36	.40	--	.020	.020
NOV 04, 1976	1.6	--	--	.010	.53	.54	--	.020	.010
OCT 27, 1977	.92	.010	.93	.090	.36	.45	1.4	.040	.010
OCT 21, 1978	1.3	<.010	1.3	.030	.27	.30	1.6	.020	.010
NOV 01, 1979	1.4	.010	1.4	.100	.45	.55	2.0	.010	.010
NOV 09, 1979	--	--	1.5	.000	.12	.12	1.6	.110	--
NOV 06, 1980	1.2	.000	1.2	.030	.23	.26	1.5	.020	.010

## 01472154 - FRENCH CREEK NEAR PUGHTOWN, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
DEC , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	<100	--	<200	--	--	--	310	--	--
MAY , 1970	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1970	--	<100	--	<900	--	<250	--	<100	--	--
MAY , 1971	--	<150	--	<200	--	<250	--	310	--	--
OCT , 1971	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	550	--	--
OCT , 1973	ND	--	ND	--	3	--	<20	160	--	<2
OCT , 1974	ND	--	ND	--	ND	--	<20	--	150	2
NOV , 1975	ND	--	ND	--	ND	--	ND	--	180	4
OCT , 1976	<2	--	<20	--	ND	--	<20	--	200	7
OCT , 1977	<2	--	ND	--	ND	--	2	--	200	ND
NOV , 1978	<2	--	ND	--	ND	--	<2	--	130	5
NOV , 1979	--	10	--	--	--	0	--	--	--	--
NOV , 1980	2	--	.00	--	0	--	1	--	110	0
DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
DEC , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	<100	<250	--	<250	--	--	--	--	6	.69
OCT , 1970	<50	--	--	<250	--	<20	--	--	1	.06
MAY , 1971	<50	<250	--	<250	--	<20	--	--	5	.82
OCT , 1971	<50	<250	--	<250	--	<50	--	--	4	.49
OCT , 1972	<50	<250	--	<250	--	<20	--	--	5	.50
OCT , 1973	--	<10	--	--	ND	--	<20	--	--	--
OCT , 1974	--	--	40	--	4	--	<20	--	--	--
NOV , 1975	--	--	20	--	<2	--	20	--	--	--
OCT , 1976	--	--	40	--	4	--	<20	--	--	--
OCT , 1977	--	--	40	--	<2	--	ND	.00	--	--
NOV , 1978	--	--	40	--	<2	--	<20	.00	--	--
NOV , 1979	--	--	--	--	--	10	--	--	--	--
NOV , 1980	--	--	30	--	1	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472157 - FRENCH CREEK NEAR PHOENIXVILLE, PA a/

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	STREAM- FLOW MEAN DAILY (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <u>e/</u>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
SEP , 1969											
04...	1510	--	--	54	134	7.4	21.0	--	--	--	--
OCT											
08...	0900	--	--	22	136	7.6	15.0	--	--	--	--
NOV											
19...	1300	--	--	18	90	6.4	8.0	--	--	--	--
DEC											
10...	--	84215 <sup>b/</sup>	50	106	130	7.0	5.0	--	15	--	<1
17...	1310	--	--	37	146	7.1	8.0	--	--	--	--
JAN , 1970											
21...	1205	--	--	25	126	7.7	.5	--	--	--	--
FEB											
24...	--	84215	64	76	80	7.8	5.0	--	<1	--	<1
26...	1250	--	--	67	127	7.3	5.0	--	--	--	--
APR											
03...	1240	--	--	436	134	7.4	8.0	--	--	--	--
MAY											
06...	1525	--	--	93	109	7.1	22.0	--	--	--	--
21...	--	84215	50	60	80	7.4	20.0	--	>30000	--	<1
JUL											
14...	1620	--	--	30	135	7.7	22.0	--	--	--	--
AUG											
27...	1245	--	--	25	130	7.7	22.0	--	--	--	--
SEP											
24...	0945	--	--	14	139	7.8	22.0	--	--	--	--
OCT											
05...	--	84215	30	15	--	--	--	--	>30000	--	--
28...	1405	--	--	23	149	7.8	11.0	--	--	--	--
DEC											
02...	0945	--	--	45	136	7.8	7.0	--	--	--	--
JAN , 1971											
07...	1600	--	--	117	126	7.4	.0	--	--	--	--
FEB											
09...	1230	--	--	361	104	6.5	1.0	--	--	--	--
MAR											
18...	1130	--	--	89	113	7.2	8.0	--	--	--	--
APR											
15...	1300	--	--	72	119	7.5	14.0	--	--	--	--
MAY											
10...	--	84215	76	91	175	7.2	16.0	--	9000	200	98
27...	1215	--	--	58	105	7.2	--	--	--	--	--
JUL											
01...	1210	--	--	34	120	7.5	24.0	--	--	--	--
AUG											
10...	1630	--	--	27	138	7.4	25.0	--	--	--	--

a/ Additional data are available from 1950 to 1969.  
 b/ Chester County Health Department Laboratory, Pennsylvania.  
 c/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.  
 d/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.  
 e/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

## 01472157 - FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	STREAM- FLOW MEAN DAILY (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN DIS- SOLVE (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0-45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
SEP , 1971	0900	--	--	68	140	7.4	15.0	--	--	--	--
OCT 04 , 1971	--	--	--	60	130	8.0	18.0	--	6600	330	330
OCT 13 , 1971	1340	84215	57	84	132	7.6	12.0	--	--	--	--
MAR 02 , 1972	1035	--	--	545	90	6.7	8.0	--	--	--	--
MAY 09 , 1972	1310	--	--	261	125	7.5	11.0	--	--	--	--
OCT 30 , 1972	1330	84215	46	50	125	7.3	11.5	--	1900	740	1100
MAR 08 , 1973	1145	--	--	162	--	6.7	--	--	--	--	--
AUG 13 , 1973	1400	--	--	42	410	6.9	27.0	5.5	--	--	--
SEP 20 , 1973	1000	--	--	31	130	7.3	--	--	--	--	--
OCT 04 , 1974	0945	1028c/	--	33	150	7.1	16.5	12.4	7700	--	150
OCT 25 , 1974	1015	1028	--	24	70	7.3	6.5	11.5	--	--	--
OCT 15 , 1975	1015	--	45	44	110	--	15.0	--	--	--	--
NOV 04 , 1975	1330	1028	54	54	150	8.4	15.0	11.8	--	--	--
JAN 22 , 1976	0900	--	150	73	140	--	.0	--	--	--	--
FEB 19 , 1976	1300	--	120	128	110	--	7.0	--	--	--	--
MAR 29 , 1976	1000	--	80	80	110	--	10.0	--	--	--	--
MAY 17 , 1976	0830	--	56	56	130	--	18.0	--	--	--	--
JUN 17 , 1976	0920	--	61	50	150	--	22.0	--	--	--	--
JUL 29 , 1976	1015	--	25	32	150	--	--	--	--	--	--
AUG 19 , 1976	1100	--	24	27	170	--	19.0	--	--	--	--
OCT 27 , 1977	1445	1028	71	77	140	7.2	8.0	12.0	--	--	--
OCT 21 , 1977	1600	80010d/	32	34	160	7.4	13.5	11.0	--	--	--
OCT 31 , 1978	1030	80010	36	36	200	7.2	9.0	12.2	--	--	--
DEC 28 , 1978	1400	80010	--	83	140	7.0	.0	--	--	--	--
NOV 09 , 1979	1030	80010	75	75	129	6.6	9.0	11.4	--	--	--
NOV 06 , 1980	0900	80010	20	20	180	6.7	5.0	12.8	--	--	--



TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25; Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472157 - FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
SEP , 1969										
04...	54	21	--	15	--	3.9	--	--	--	--
OCT										
08...	48	8	--	13	--	3.8	--	5.4	--	2.6
NOV										
19...	41	14	--	11	--	3.2	--	3.5	--	1.1
DEC										
10...	--	--	--	--	--	--	--	--	--	--
17...	52	22	--	14	--	4.2	--	--	--	--
JAN , 1970										
21...	44	19	--	12	--	3.5	--	--	--	--
FEB										
24...	--	--	13	--	3.2	--	6.9	--	1.8	--
26...	43	20	--	11	--	3.8	--	4.8	--	1.3
APR										
03...	39	28	--	9.0	--	4.0	--	3.4	--	1.8
MAY										
06...	40	11	--	10	--	3.6	--	5.0	--	1.4
21...	--	--	11	--	3.4	--	6.4	--	1.6	--
JUL										
14...	51	17	--	13	--	4.5	--	5.0	--	1.7
AUG										
27...	43	7	--	12	--	3.2	--	6.0	--	2.0
SEP										
24...	51	9	--	13	--	4.6	--	5.6	--	2.0
OCT										
05...	--	--	11	--	2.5	--	3.6	--	1.3	--
28...	53	15	--	14	--	4.5	--	6.0	--	2.1
DEC										
02...	49	20	--	13	--	4.1	--	5.4	--	1.4
JAN , 1971										
07...	39	22	--	10	--	3.5	--	5.6	--	1.3
FEB										
09...	29	18	--	7.5	--	2.5	--	5.2	--	3.8
MAR										
18...	37	18	--	8.6	--	3.8	--	--	--	--
APR										
15...	41	16	--	10	--	3.9	--	--	--	--
MAY										
10...	--	--	10	--	3.9	--	6.1	--	1.3	--
27...	40	13	--	10	--	3.6	--	5.1	--	1.2
JUL										
01...	39	6	--	10	--	3.5	--	--	--	--
AUG										
10...	48	11	--	12	--	4.3	--	8.7	--	1.8
SEP										
24...	48	17	--	12	--	4.3	--	5.6	--	1.7
OCT										
04...	--	--	11	--	3.5	--	5.9	--	1.7	--

## 01472157 - FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT , 1971										
13...		42	16	--	10	--	4.1	--	5.0	-- 1.7
MAR , 1972										
02...		32	15	--	8.5	--	2.5	--	--	--
MAY										
09...		40	15	--	10	--	3.7	--	5.2	-- 1.1
OCT , 1972										
30...		--	--	11	--	3.8	--	5.0	--	3.1 --
MAR , 1973										
08...		--	--	--	--	--	--	--	--	--
AUG										
13...		130	0	--	4.8	--	28	--	--	--
SEP										
20...		37	0	--	14	--	.20	--	--	--
OCT										
04...		48	13	--	12	--	4.5	--	6.0	-- 1.8
OCT , 1974										
25...		63	27	--	17	--	4.9	--	6.5	-- 1.7
OCT , 1975										
15...		65	23	--	12	--	8.5	--	--	--
NOV										
04...		51	21	--	14	--	4.0	--	5.6	-- 1.6
JAN , 1976										
22...		57	27	--	11	--	7.0	--	--	--
FEB										
19...		53	25	--	9.6	--	7.0	--	--	--
MAR , 1976										
29...		30	0	--	10	--	1.0	--	--	--
MAY										
17...		59	0	--	12	--	7.0	--	--	--
JUN										
17...		55	17	--	12	--	6.0	--	--	--
JUL										
29...		57	17	--	13	--	6.0	--	--	--
AUG										
19...		54	11	--	14	--	4.5	--	--	--
OCT										
27...		45	11	--	11	--	4.3	--	5.7	-- 2.5
OCT , 1977										
21...		54	24	--	14	--	4.6	--	6.6	-- 2.1
OCT , 1978										
31...		56	21	--	15	--	4.6	--	6.5	-- 2.1
DEC										
28...		--	--	--	--	--	--	--	--	--
NOV , 1979										
09...		--	--	--	--	--	--	--	--	--
NOV , 1980										
06...		53	--	--	14	--	4.4	--	6.1	-- 1.8

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472157 - FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C DIS- SOLVED (MG/L)
SEP , 1969									
OCT 04...	40	--	33	14	9.5	--	18	--	--
OCT 08...	49	0	40	12	6.8	.20	15	89	--
NOV 19...	33	0	27	11	5.6	.10	13	87	--
DEC 10...	--	--	--	7.1	9.5	--	--	--	--
DEC 17...	36	0	30	22	14	--	--	--	--
JAN , 1970									
JAN 21...	31	--	25	18	7.8	--	--	--	--
FEB 24...	--	--	--	13	11	--	--	--	118
FEB 26...	28	--	23	17	8.5	.00	15	96	--
APR 03...	14	0	11	24	6.1	.10	9.8	84	--
MAY 06...	35	0	29	13	6.5	.00	13	80	--
MAY 21...	--	--	--	16	3.2	--	--	--	120
JUL 14...	42	0	34	11	7.4	.30	18	103	--
AUG 27...	44	0	36	11	6.6	.10	16	104	--
SEP 24...	51	0	42	11	7.3	.00	17	105	--
OCT 05...	--	--	--	5.8	8.0	--	--	--	90
OCT 08...	47	--	39	16	7.9	.30	20	106	--
DEC 02...	35	0	29	18	7.7	.40	15	85	--
JAN , 1971									
JAN 07...	21	--	17	20	8.1	.30	14	101	--
FEB 09...	13	0	11	16	9.0	.20	6.5	76	--
MAR 18...	23	0	19	18	8.4	--	--	--	--
APR 15...	31	0	25	17	7.0	--	--	--	--
MAY 10...	--	--	--	39	5.5	--	--	--	81
MAY 27...	33	0	27	13	7.4	.00	15	89	--
JUL 01...	40	0	33	11	5.6	--	--	--	--
AUG 10...	45	0	37	13	8.3	.00	17	89	--
SEP 24...	38	0	31	14	8.0	.10	19	95	--
OCT 04...	--	--	--	13	6.6	--	--	--	85

## 01472157 - FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)
OCT , 1971									
13...	32	0	26	16	7.6	.30	15	93	--
MAR , 1972									
02...	21	0	17	16	9.0	--	--	--	--
MAY , 1972									
09...	31	0	25	14	6.4	.20	13	112	--
OCT , 1972									
30...	--	--	--	16	11	--	--	--	102
MAR , 1973									
08...	--	--	140	--	55	--	--	--	--
AUG , 1973									
13...	--	--	157	39	34	--	--	--	--
SEP , 1973									
20...	--	--	39	18	5.0	--	--	--	--
OCT , 1973									
04...	44	0	36	12	7.5	.30	16	--	--
OCT , 1974									
25...	44	0	36	13	9.5	.20	16	99	--
OCT , 1975									
15...	--	--	42	18	9.0	--	--	--	124
NOV , 1975									
04...	38	0	31	13	8.2	.10	15	80	--
JAN , 1976									
22...	--	--	30	22	20	--	--	--	90
FEB , 1976									
19...	--	--	28	14	14	--	--	--	92
MAR , 1976									
29...	--	--	32	16	9.0	--	--	--	90
MAY , 1976									
17...	--	--	170	12	8.0	--	--	--	180
JUN , 1976									
17...	--	--	38	140	8.0	--	--	--	106
JUL , 1976									
29...	--	--	40	10	12	--	--	--	96
AUG , 1976									
19...	--	--	44	12	12	--	--	--	124
OCT , 1976									
27...	41	0	34	19	9.2	.10	16	93	--
OCT , 1977									
21...	37	0	30	17	8.8	.10	17	108	--
OCT , 1978									
31...	43	0	35	14	8.8	.10	16	90	--
DEC , 1978									
28...	--	--	--	--	--	--	--	--	--
NOV , 1979									
09...	--	--	31	13	8.1	.10	16	--	--
NOV , 1980									
06...	--	--	--	15	11	.10	17	100	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472157 - FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
SEP , 1969										
04...	--	--	--	--	--	--	--	--	--	--
OCT...	83	--	--	--	--	--	--	--	--	--
NOV...	65	--	--	--	--	--	--	--	--	--
19...										
DEC...	--	.20	--	--	--	--	--	--	--	.030
10...	--	--	--	--	--	--	--	--	--	--
17...										
JAN , 1970										
21...	--	--	--	--	--	--	--	--	--	--
FEB...										
24...	--	.40	--	--	--	--	--	--	--	--
26...	75	--	--	--	--	--	--	--	--	--
APR...										
03...	65	--	--	--	--	--	--	--	--	--
MAY...										
06...	70	--	--	--	--	--	--	--	--	--
21...	--	1.3	--	--	--	--	--	--	--	.050
JUL...										
14...	82	--	--	--	--	--	--	--	--	--
AUG...										
27...	79	--	--	--	--	--	--	--	--	--
SEP...										
24...	86	--	--	--	--	--	--	--	--	--
OCT...										
05...	--	1.0	<.010	--	<.010	<.01	--	--	<.010	.010
28...	94	--	--	--	--	--	--	--	--	--
DEC...										
02...	82	--	--	--	--	--	--	--	--	--
JAN , 1971										
07...	73	--	--	--	--	--	--	--	--	--
FEB...										
09...	57	--	--	--	--	--	--	--	--	--
MAR...										
18...	--	--	--	--	--	--	--	--	--	--
APR...										
15...	--	--	--	--	--	--	--	--	--	--
MAY...										
10...	--	1.3	.010	--	.210	.26	--	--	.030	.020
27...	72	--	--	--	--	--	--	--	--	--
JUL...										
01...	--	--	--	--	--	--	--	--	--	--
AUG...										
10...	87	--	--	--	--	--	--	--	--	--
SEP...										
24...	83	--	--	--	--	--	--	--	--	--
OCT...										
04...	--	1.1	<.010	--	.020	.32	--	--	.050	.040

## 01472157 - FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

DATE	SOLIDS, SUM OF CONSTITUENTS, DTS- SOLVED (MG/L)	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
OCT 13, 1971	79	--	--	--	--	--	--	--	--	.020
MAR 02, 1972	--	--	--	--	--	--	--	--	--	.032
MAY 09, 1972	71	--	--	--	--	--	--	--	--	.014
OCT 30, 1972	--	.34	<.010	--	.010	.40	--	--	.060	.010
MAR 08, 1973	--	2.6	.060	--	<.010	--	--	--	.900	--
AUG 13, 1973	--	2.9	.024	--	.070	--	--	--	.110	--
SEP 20, 1973	--	3.4	.018	--	.050	--	--	--	.060	--
OCT 04, 1974	82	1.1	.003	1.1	.070	.63	.70	1.8	.010	.010
OCT 25, 1974	91	1.3	--	--	.020	.38	.40	--	.020	.010
OCT 15, 1975	--	1.6	.024	--	.020	--	--	--	.050	--
NOV 04, 1975	80	1.5	--	--	.010	.59	.60	--	.020	.010
JAN 22, 1976	--	2.8	.112	--	.030	--	--	--	.060	--
FEB 19, 1976	--	2.0	.048	--	.150	--	--	--	.180	--
MAR 29, 1976	--	1.9	.034	--	.030	--	--	--	.090	--
MAY 17, 1976	--	1.8	.050	--	.110	--	--	--	.130	--
JUN 17, 1976	--	1.6	.040	--	.090	--	--	--	.120	--
JUL 29, 1976	--	1.4	.038	--	.040	--	--	--	.020	--
AUG 19, 1976	--	1.3	.028	--	.050	--	--	--	.050	--
OCT 27, 1976	88	.91	.010	.92	.090	.36	.45	1.4	.040	.010
OCT 21, 1977	89	1.3	<.010	1.3	.020	.28	.30	1.6	.020	.010
OCT 31, 1978	88	1.2	.010	1.2	.020	.17	.19	1.4	.010	.010
DEC 28, 1978	--	--	--	--	--	--	--	--	--	--
NOV 09, 1979	--	--	--	1.6	.000	.22	.22	1.8	.170	--
NOV 06, 1980	--	1.2	.000	1.2	.040	.15	.19	1.4	.020	.010

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472157 - FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL, RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL, RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL, RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL, RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
SEP , 1969										
04...	--	--	--	--	--	--	--	--	--	--
OCT 08...	--	--	--	--	--	--	--	--	--	--
NOV 19...	--	--	--	--	--	--	--	--	--	--
DEC 10...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
JAN , 1970										
21...	--	--	--	--	--	--	--	--	--	--
FEB 24...	--	<100	--	<200	--	--	--	410	--	--
25...	--	--	--	--	--	--	--	--	--	--
APR 03...	--	--	--	--	--	--	--	--	--	--
MAY 06...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
JUL 14...	--	--	--	--	--	--	--	--	--	--
AUG 27...	--	--	--	--	--	--	--	--	--	--
SEP 24...	--	--	--	--	--	--	--	--	--	--
OCT 05...	--	<100	--	<900	--	<250	--	<100	--	--
28...	--	--	--	--	--	--	--	--	--	--
DEC 02...	--	--	--	--	--	--	--	--	--	--
JAN , 1971										
07...	--	--	--	--	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--	--	--	--	--
MAR 18...	--	--	--	--	--	--	--	--	--	--
APR 15...	--	--	--	--	--	--	--	--	--	--
MAY 10...	--	<150	--	<200	--	<250	--	<330	--	--
27...	--	--	--	--	--	--	--	--	--	--
JUL 01...	--	--	--	--	--	--	--	--	--	--
AUG 10...	--	--	--	--	--	--	--	--	--	--
SEP 24...	--	--	--	--	--	--	--	--	--	--
OCT 04...	--	<100	--	<200	--	<250	--	<150	--	--

## 01472157 - FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT , 1971	--	--	--	--	--	--	--	--	--	--
MAR , 1972	--	--	--	--	--	--	--	--	--	--
MAY , 1972	--	--	--	--	--	--	--	--	--	--
OCT , 1972	--	--	--	--	--	--	--	--	--	--
MAR , 1973	--	<100	--	<200	--	<250	--	430	--	--
AUG , 1973	--	--	--	--	--	--	--	7700	--	--
SEP , 1973	--	--	--	--	--	--	--	120	--	--
OCT , 1973	--	--	--	--	--	--	--	260	--	--
OCT , 1974	ND	--	ND	--	ND	--	ND	110	--	<2
OCT , 1975	ND	--	ND	--	ND	--	ND	--	100	2
NOV , 1975	--	--	--	--	--	--	--	180	--	--
JAN , 1976	3	--	ND	--	ND	--	ND	--	120	13
FEB , 1976	--	--	--	--	--	--	--	350	--	--
MAR , 1976	--	--	--	--	--	--	--	1100	--	--
MAY , 1976	--	--	--	--	--	--	--	20	--	--
JUN , 1976	--	--	--	--	--	--	--	450	--	--
JUL , 1976	--	--	--	--	--	--	--	1300	--	--
AUG , 1976	--	--	--	--	--	--	--	150	--	--
OCT , 1976	--	--	--	--	--	--	--	170	--	--
OCT , 1977	<2	--	<20	--	ND	--	ND	--	220	7
OCT , 1978	11	--	ND	--	ND	--	2	--	170	160
DEC , 1978	ND	--	ND	--	ND	--	<2	--	110	2
NOV , 1979	--	--	--	--	--	--	--	--	--	--
NOV , 1980	--	20	--	--	--	0	--	--	--	--
OCT , 1980	2	--	1	--	1	--	1	--	100	0



TABLE 2.-- Water-quality data for surface-water sites--Continued  
[Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472157 - FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
SEP , 1969										
04...	--	--	--	--	--	--	--	--	--	--
OCT										
08...	--	--	--	--	--	--	--	--	--	--
NOV										
19...	--	--	--	--	--	--	--	--	--	--
DEC										
10...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
JAN , 1970										
21...	--	--	--	--	--	--	--	--	--	--
FEB										
24...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
APR										
03...	--	--	--	--	--	--	--	--	--	--
MAY										
06...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	12	1.6
JUL										
14...	--	--	--	--	--	--	--	--	--	--
AUG										
27...	--	--	--	--	--	--	--	--	--	--
SEP										
24...	--	--	--	--	--	--	--	--	--	--
OCT										
05...	<50	<250	--	<250	--	<20	--	--	1	.08
28...	--	--	--	--	--	--	--	--	--	--
DEC										
02...	--	--	--	--	--	--	--	--	--	--
JAN , 1971										
07...	--	--	--	--	--	--	--	--	--	--
FEB										
09...	--	--	--	--	--	--	--	--	--	--
MAR										
18...	--	--	--	--	--	--	--	--	--	--
APR										
15...	--	--	--	--	--	--	--	--	--	--
MAY										
10...	<50	<250	--	<250	--	<20	--	--	18	3.7
27...	--	--	--	--	--	--	--	--	--	--
JUL										
01...	--	--	--	--	--	--	--	--	--	--
AUG										
10...	--	--	--	--	--	--	--	--	--	--
SEP										
24...	--	--	--	--	--	--	--	--	--	--
OCT										
04...	<50	<250	--	<250	--	<50	--	--	2	.31

## 01472157 - FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT , 1971	--	--	--	--	--	--	--	--	--	--
MAR , 1972	--	--	--	--	--	--	--	--	--	--
MAY , 1972	--	--	--	--	--	--	--	--	--	--
OCT , 1972	--	--	--	--	--	--	--	--	--	--
MAR , 1973	<50	<250	--	<250	--	<20	--	--	5	.62
AUG , 1973	--	--	--	--	--	--	--	.15	--	--
SEP , 1973	--	--	--	--	--	--	--	--	--	--
OCT , 1973	--	--	--	--	--	--	--	--	--	--
OCT , 1974	--	<10	--	--	ND	--	<20	--	--	--
OCT , 1975	--	--	20	--	3	--	<20	--	--	--
NOV , 1975	--	--	--	--	--	--	--	--	--	--
JAN , 1976	--	--	<10	--	<2	--	<20	--	--	--
FEB , 1976	--	--	--	--	--	--	--	--	--	--
MAR , 1976	--	--	--	--	--	--	--	.00	--	--
MAY , 1976	--	--	--	--	--	--	--	--	--	--
JUN , 1976	--	--	--	--	--	--	--	--	--	--
JUL , 1976	--	--	--	--	--	--	--	--	--	--
AUG , 1976	--	30	--	--	--	--	--	.00	--	--
OCT , 1976	--	--	--	--	--	--	--	.00	--	--
OCT , 1977	--	--	20	--	8	--	<20	--	--	--
OCT , 1978	--	--	20	--	<2	--	<20	.00	--	--
DEC , 1978	--	--	<10	--	4	--	ND	.00	--	--
NOV , 1979	--	--	--	--	--	--	--	--	--	--
NOV , 1980	--	--	--	--	--	10	--	--	--	--
NOV , 1980	--	--	20	--	0	--	2	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

014721612 - FRENCH CREEK AT RAILROAD BRIDGE AT PHOENIXVILLE, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sub>d</sub> /	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
MAY , 1970										
21...	--	84215 <sub>a</sub> /	--	--	--	--	--	<1	--	<1
OCT 05...	--	84215	38	--	--	--	--	30000	--	110
MAY , 1971										
11...	--	84215	91	170	7.3	15.0	--	9500	900	80
OCT 04...	--	84215	68	195	8.0	19.0	--	54000	2900	480
OCT , 1972										
24...	0945	84215	55	215	7.8	14.0	--	1300	12	25
OCT , 1973										
04...	0835	1028 <sub>b</sub> /	--	320	7.4	21.0	10.2	27000	--	87
OCT , 1974										
25...	1100	1028	--	245	7.4	14.5	10.4	--	--	--
NOV , 1975										
07...	0915	1028	--	240	7.6	15.5	10.4	--	--	--
OCT , 1976										
22...	1130	1028	--	180	7.2	11.0	11.8	--	--	--
OCT , 1977										
19...	1330	1028	--	245	7.1	12.5	11.6	--	--	--
OCT , 1978										
31...	0945	80010 <sub>c</sub> /	--	490	7.4	14.0	12.0	--	--	--
NOV , 1979										
14...	1130	80010	--	167	6.8	7.5	10.4	--	--	--
NOV , 1980										
10...	1400	80010	--	405	7.7	9.0	11.6	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY , 1970										
21...	--	--	--	--	--	--	--	--	--	--
OCT 05...	--	--	22	--	8.9	--	27	--	3.2	--
MAY , 1971										
11...	--	--	14	--	5.1	--	9.9	--	1.8	--
OCT 04...	--	--	18	--	5.6	--	12	--	2.5	--
OCT , 1972										
24...	--	--	22	--	6.5	--	17	--	2.4	--
OCT , 1973										
04...	97	45	--	24	--	9.0	--	14	--	2.9
OCT , 1974										
25...	130	65	--	35	--	11	--	28	--	3.4
NOV , 1975										
07...	88	38	--	23	--	7.4	--	9.7	--	2.0
OCT , 1976										
22...	57	27	--	14	--	5.3	--	6.7	--	3.8
OCT , 1977										
19...	94	58	--	25	--	7.7	--	9.6	--	2.8
OCT , 1978										
31...	130	69	--	34	--	10	--	18	--	3.3
NOV , 1979										
14...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
10...	110	--	--	30	--	8.7	--	16	--	2.9

<sup>a</sup>/ Chester County Health Department Laboratory, Pennsylvania.  
<sup>b</sup>/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.  
<sup>c</sup>/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.  
<sup>d</sup>/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

014721612 - FRENCH CREEK AT RAILROAD BRIDGE AT PHOENIXVILLE, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)
MAY , 1970									
21...	--	--	--	16	7.4	--	--	--	--
OCT									
05...	--	--	--	52	30	--	--	--	122
MAY , 1971									
11...	--	--	--	26	8.2	--	--	--	105
OCT									
04...	--	--	--	24	13	--	--	--	136
OCT , 1972									
24...	--	--	--	36	18	--	--	--	152
OCT , 1973									
04...	64	--	52	46	16	.30	11	--	--
OCT , 1974									
25...	83	--	68	70	37	.20	12	259	--
NOV , 1975									
07...	61	--	50	34	13	.20	11	149	--
OCT , 1976									
22...	37	--	30	27	12	.20	13	118	--
OCT , 1977									
19...	44	--	36	42	13	.40	9.6	155	--
OCT , 1978									
31...	70	--	57	54	24	.50	13	198	--
NOV , 1979									
14...	--	--	32	19	11	.10	16	--	--
NOV , 1980									
10...	--	--	--	42	22	.80	14	187	--

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
MAY , 1970										
21...	--	1.6	.050	--	--	--	--	--	--	.030
OCT										
05...	--	1.7	.060	--	<.000	.04	--	--	1.50	.150
MAY , 1971										
11...	--	.97	.000	--	.490	<.00	--	--	.080	.020
OCT										
04...	--	1.5	<.000	--	.620	.24	--	--	.080	.030
OCT , 1972										
24...	--	.98	.000	--	.360	.15	--	--	.070	.040
OCT , 1973										
04...	155	1.6	.000	1.6	.100	.45	.55	2.2	.100	.090
OCT , 1974										
25...	240	2.2	--	--	.210	.60	.81	--	.190	.130
NOV , 1975										
07...	130	2.1	--	--	<.000	.73	.73	--	.060	.040
OCT , 1976										
22...	100	.46	.000	.46	.090	.26	.35	.81	.080	.030
OCT , 1977										
19...	130	2.0	.020	2.0	.160	.47	.63	2.6	.080	.040
OCT , 1978										
31...	190	1.7	.060	1.8	.040	.28	.32	2.1	.080	.070
NOV , 1979										
14...	--	--	--	1.7	--	.53	.53	2.2	.030	--
NOV , 1980										
10...	--	1.5	.030	1.5	.080	.18	.26	1.8	.080	.070

## 014721612 - FRENCH CREEK AT RAILROAD BRIDGE AT PHOENIXVILLE, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
MAY , 1970	--	--	--	--	--	--	--	--	--	--
OCT 21...	--	--	--	--	--	--	--	--	--	--
OCT 05...	--	<100	--	<900	--	<250	--	<100	--	--
MAY 11, 1971	--	<150	--	<200	--	<250	--	250	--	--
OCT 04...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 24, 1972	--	<100	--	<200	--	<250	--	310	--	--
OCT 04, 1973	--	--	--	--	--	--	--	--	120	7
OCT 25, 1974	3	--	<20	--	--	--	<20	--	80	3
NOV 07, 1975	<2	--	--	--	--	--	--	--	110	12
OCT 22, 1976	2	--	<20	--	--	--	<20	--	270	21
OCT 19, 1977	--	--	2	--	--	--	3	--	100	10
OCT 31, 1978	<2	--	3	--	--	--	3	--	140	110
NOV 14, 1979	--	20	--	--	--	--	--	--	--	--
NOV 10, 1980	8	--	2	--	1	--	6	--	350	180

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
MAY , 1970	--	--	--	--	--	--	--	--	--	--
OCT 21...	--	--	--	--	--	--	--	--	--	--
OCT 05...	<50	<250	--	<250	--	<20	--	--	8	.83
MAY 11, 1971	<50	<250	--	<250	--	<20	--	--	9	2.2
OCT 04...	<50	<250	--	<250	--	<50	--	--	3	.55
OCT 24, 1972	<50	<250	--	<250	--	<20	--	--	--	--
OCT 04, 1973	--	--	140	--	8	--	20	--	--	--
OCT 25, 1974	--	--	120	--	14	--	30	--	--	--
NOV 07, 1975	--	--	80	--	5	--	<20	--	--	--
OCT 22, 1976	--	--	210	--	6	--	120	--	--	--
OCT 19, 1977	--	--	230	--	8	--	<20	.30	--	--
OCT 31, 1978	--	--	70	--	3	--	100	.10	--	--
NOV 14, 1979	--	--	--	--	--	20	--	--	--	--
NOV 10, 1980	--	--	80	--	3	--	450	--	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472170 - PICKERING CREEK NEAR EAGLE, PA a/

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <u>e/</u>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
OCT 22, 1969	--	84215b/	3.0	160	6.9	11.0	--	16	--	<1
FEB 18, 1970	--	84215	4.7	150	7.6	3.0	--	<1	--	<1
MAY 04, 1970	--	84215	2.4	111	7.8	12.0	--	190	--	24
SEP 28, 1970	--	84215	1.5	100	8.0	13.0	--	32000	--	2700
MAY 03, 1971	--	84215	2.3	165	7.9	10.0	--	1000	630	90
SEP 27, 1971	--	84215	1.6	150	7.4	14.0	--	28000	720	1800
OCT 03, 1972	0735	84215	2.4	161	6.9	9.5	--	11700	1200	720
OCT 02, 1973	0815	1028c/	--	200	7.6	14.5	12.0	43300	1600	1200
OCT 23, 1974	1450	1028	--	135	7.7	10.5	10.6	--	--	--
NOV 03, 1975	0845	1028	--	190	7.4	11.0	11.9	--	--	--
OCT 21, 1976	0845	1028	--	190	7.1	10.0	11.2	--	--	--
OCT 19, 1977	0930	80010d/	--	205	7.2	10.5	10.8	--	--	--
OCT 30, 1978	1400	80010	--	270	7.5	10.0	13.0	--	--	--
NOV 01, 1979	1415	80010	--	220	7.8	13.0	11.8	--	--	--
OCT 30, 1980	1250	80010	--	245	6.9	11.5	11.7	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 22, 1969	--	--	--	--	--	--	--	--	--	--
FEB 18, 1970	--	--	--	--	--	--	--	--	--	--
MAY 04, 1970	--	--	13	--	4.8	--	7.5	--	1.5	--
SEP 28, 1970	--	--	18	--	5.3	--	8.1	--	3.5	--
MAY 03, 1971	--	--	17	--	5.1	--	6.5	--	1.3	--
SEP 27, 1971	--	--	15	--	4.9	--	7.7	--	2.5	--
OCT 03, 1972	--	--	19	--	5.2	--	5.5	--	1.5	--
OCT 02, 1973	67	33	--	17	--	5.9	--	6.5	--	2.0
OCT 23, 1974	64	26	--	16	--	5.8	--	6.0	--	2.0
NOV 03, 1975	74	34	--	21	--	5.2	--	6.0	--	2.0
OCT 21, 1976	56	26	--	14	--	5.2	--	5.7	--	4.7
OCT 19, 1977	73	27	--	19	--	6.1	--	7.9	--	2.6
OCT 30, 1978	79	37	--	21	--	6.5	--	7.5	--	2.4
NOV 01, 1979	--	--	--	--	--	--	--	--	--	--
OCT 30, 1980	72	--	--	19	--	5.9	--	6.8	--	2.0

a/ Additional data are available for 1966.

b/ Chester County Health Department Laboratory, Pennsylvania.

c/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

d/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

e/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

## 01472170 - PICKERING CREEK NEAR EAGLE, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)
OCT , 1969									
22...	--	--	--	16	15	--	--	--	--
FEB , 1970									
18...	--	--	--	17	31	--	--	--	--
MAY , 1971									
04...	--	--	--	20	21	--	--	--	120
SEP , 1971									
28...	--	--	--	14	18	--	--	--	136
MAY , 1971									
03...	--	--	--	15	12	--	--	--	105
SEP , 1971									
27...	--	--	--	15	12	--	--	--	144
OCT , 1972									
03...	--	--	--	30	15	--	--	--	110
OCT , 1973									
02...	41	0	34	11	17	.80	19	--	--
OCT , 1974									
23...	46	0	38	13	17	.10	19	123	--
NOV , 1975									
03...	49	0	40	14	14	.10	17	118	--
OCT , 1976									
21...	36	0	30	21	13	.10	14	110	--
OCT , 1977									
19...	56	0	46	18	17	.10	19	127	--
OCT , 1978									
30...	51	0	42	17	16	.10	17	121	--
NOV , 1979									
01...	--	--	9	16	18	.10	17	--	--
OCT , 1980									
30...	--	--	--	16	19	.00	22	124	--

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
OCT , 1969										
22...	--	.25	--	--	--	--	--	--	--	.020
FEB , 1970										
18...	--	.47	--	--	--	--	--	--	--	.050
MAY , 1971										
04...	--	.39	--	--	--	--	--	--	--	.010
SEP , 1971										
28...	--	1.3	<.010	--	--	--	--	--	.030	.010
MAY , 1971										
03...	--	1.6	.010	--	.280	.37	--	--	.050	.010
SEP , 1971										
27...	--	2.2	<.010	--	.010	.52	--	--	.050	.020
OCT , 1972										
03...	--	2.7	<.010	--	.060	.28	--	--	.030	.020
OCT , 1973										
02...	104	2.0	.002	2.0	.040	.88	.92	2.9	.040	.010
OCT , 1974										
23...	100	1.9	--	--	.080	.78	.86	--	.040	.020
NOV , 1975										
03...	100	2.0	--	--	.010	.66	.67	--	.020	.010
OCT , 1976										
21...	96	1.2	.010	1.2	.100	.63	.73	1.9	.170	.040
OCT , 1977										
19...	120	.43	<.010	.43	.020	.29	.31	.74	.090	<.010
OCT , 1978										
30...	110	1.7	.010	1.7	.030	.25	.28	2.0	<.010	.010
NOV , 1979										
01...	--	--	--	2.5	.020	.44	.46	3.0	.060	--
OCT , 1980										
30...	--	1.8	.000	1.8	.050	.08	.13	1.9	.040	.020

## 01472170 - PICKERING CREEK NEAR EAGLE, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT , 1969										
22... 1970	--	--	--	--	--	--	--	--	--	--
FEB... 18...	--	--	--	--	--	--	--	--	--	--
MAY... 04...	--	<100	--	<200	--	<250	--	<150	--	--
SEP... 28...	--	<100	--	<900	--	<250	--	<100	--	--
MAY , 1971	--	<150	--	<200	--	<250	--	250	--	--
03... 27...	--	<100	--	<200	--	<250	--	550	--	--
SEP... 03...	--	<100	--	<200	--	<250	--	440	--	--
OCT , 1972	--									
02... 23...	<2	--	ND	--	ND	--	<20	660	--	<2
OCT , 1974	<2	--	ND	--	ND	--	<20	--	140	2
NOV , 1975	ND	--	ND	--	ND	--	<20	--	60	2
03... 21...	ND	--	<20	--	2	--	<20	--	210	ND
OCT , 1976	<2	--								
19... 30...	ND	--	<2	--	ND	--	3	--	170	8
OCT , 1978	ND	--	ND	--	ND	--	ND	--	90	ND
NOV , 1979	--	10	--	--	--	10	--	--	--	--
01... 30...	--									
OCT , 1980	3	--	.00	--	0	--	0	--	140	4

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT , 1969										
22... 1970	--	--	--	--	--	--	--	--	--	--
FEB... 18...	--	--	--	--	--	--	--	--	--	--
MAY... 04...	<100	<250	--	<250	--	<50	--	--	11	.07
SEP... 28...	<50	<250	--	<250	--	<20	--	--	5	.02
MAY , 1971	<50	<250	--	<250	--	<20	--	--	12	.07
03... 27...	<50	<250	--	<250	--	<50	--	--	5	.02
SEP... 03...	<50	<250	--	<250	--	<20	--	--	20	.13
OCT , 1972										
02... 23...	--	70	--	--	<2	--	30	--	--	--
OCT , 1974	--	--	40	--	3	--	<20	--	--	--
NOV , 1975	--	--	50	--	3	--	<20	--	--	--
03... 21...	--	--	90	--	5	--	20	--	--	--
OCT , 1976	--	--	80	--	3	--	<20	.00	--	--
19... 30...	--	--	10	--	ND	--	ND	.10	--	--
OCT , 1978	--	--	--	--	--	20	--	--	--	--
NOV , 1979	--	--	--	--	--	--	--	--	--	--
01... 30...	--	--	40	--	0	--	1	.00	--	--



TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472174 - PICKERING CREEK NEAR CHESTER SPRINGS, PA a/

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <u>e/</u>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	
OCT 22, 1969	--	84215 <u>a/</u>	8.7	125	7.2	12.0	--	38	--	<1	
FEB 18, 1970	--	84215	11	140	7.4	5.0	--	2	--	13	
MAY 05, 1970	--	84215	9.3	112	7.9	13.0	--	110	--	8	
SEP 28, 1970	--	84215	2.9	145	8.2	13.0	--	>300000.0	--	1700	
MAY 03, 1971	--	84215	7.8	165	8.1	10.5	--	10000	2900	960	
SEP 27, 1971	--	84215	11	150	7.5	14.0	--	34000	520	1200	
OCT 03, 1972	0940	84215	3.8	157	7.0	11.0	--	9000	600	1000	
OCT 02, 1973	0905	1028 <u>c/</u>	4.6	190	7.6	15.0	11.8	29300	520	2000	
OCT 23, 1974	1400	1028	4.0	125	7.5	9.5	10.8	--	--	--	
NOV 03, 1975	1000	1028	6.5	190	7.4	11.5	10.4	--	--	--	
OCT 21, 1976	1000	1028	9.4	200	7.0	10.5	10.8	--	--	--	
OCT 19, 1977	1030	80010 <u>c/</u>	5.6	190	7.1	10.5	10.4	--	--	--	
OCT 30, 1978	1330	80010	4.1	230	7.3	10.0	11.6	--	--	--	
NOV 01, 1979	1530	80010	9.3	210	7.3	12.0	9.8	--	--	--	
OCT 30, 1980	1030	80010	2.6	175	6.8	7.5	12.0	--	--	--	
DATE		HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL, RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL, RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL, RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 22, 1969	--	--	--	--	--	--	--	--	--	--	--
FEB 18, 1970	--	--	--	--	--	--	--	--	--	--	--
MAY 05, 1970	--	--	--	16	--	7.6	--	7.9	--	1.6	--
SEP 28, 1970	--	--	--	17	--	4.8	--	7.5	--	3.4	--
MAY 03, 1971	--	--	--	18	--	4.9	--	6.3	--	1.4	--
SEP 27, 1971	--	--	--	15	--	4.7	--	6.9	--	2.2	--
OCT 03, 1972	--	--	--	18	--	4.4	--	5.3	--	1.4	--
OCT 02, 1973	63	20	--	17	--	5.0	--	6.5	--	1.9	--
OCT 23, 1974	66	24	--	18	--	5.0	--	6.0	--	1.8	--
NOV 03, 1975	72	28	--	19	--	6.0	--	6.0	--	2.0	--
OCT 21, 1976	55	21	--	14	--	4.9	--	5.7	--	4.7	--
OCT 19, 1977	71	28	--	19	--	5.7	--	6.7	--	2.8	--
OCT 30, 1978	72	27	--	20	--	5.3	--	6.5	--	2.2	--
NOV 01, 1979	--	--	--	--	--	--	--	--	--	--	--
OCT 30, 1980	72	--	--	20	--	5.4	--	6.4	--	2.0	--

a/ Additional data are available from 1967 to 1969.

c/ Chester County Health Department Laboratory, Pennsylvania.

d/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

e/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

f/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued  
[Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472174 - PICKERING CREEK NEAR CHESTER SPRINGS, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
OCT 22, 1969	--	--	--	89	5.0	--	--	--	--	--
FEB 18, 1970	--	--	--	13	25	--	--	--	--	--
MAY 05, 1970	--	--	--	17	6.3	--	--	--	106	--
SEP 28, 1970	--	--	--	9.1	14	--	--	--	137	--
MAY 03, 1971	--	--	--	14	9.1	--	--	--	120	--
SEP 27, 1971	--	--	--	15	14	--	--	--	121	--
OCT 03, 1972	--	--	--	29	11	--	--	--	187	--
OCT 02, 1973	52	0	43	13	12	.70	18	--	--	100
OCT 23, 1974	51	0	42	13	15	.10	18	107	--	100
NOV 03, 1975	54	0	44	16	11	.10	17	117	--	100
OCT 21, 1976	41	0	34	21	12	.10	14	110	--	97
OCT 19, 1977	53	0	43	18	13	.10	17	118	--	110
OCT 30, 1978	55	0	45	14	14	.10	19	115	--	110
NOV 01, 1979	--	--	32	14	12	.10	17	--	--	--
OCT 30, 1980	--	--	--	18	15	.00	21	114	--	--

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
OCT 22, 1969	.07	--	--	--	--	--	--	--	--
FEB 18, 1970	.50	--	--	--	--	--	--	--	--
MAY 05, 1970	.50	--	--	--	--	--	--	--	--
SEP 28, 1970	1.6	<.010	--	--	--	--	.020	.010	
MAY 03, 1971	1.9	.020	--	.210	.14	--	.070	.010	
SEP 27, 1971	2.6	<.010	--	.120	.36	--	.100	.010	
OCT 03, 1972	2.9	<.010	--	.010	.23	--	.040	.010	
OCT 02, 1973	2.3	.001	2.3	.050	.81	.86	3.2	.040	.020
OCT 23, 1974	2.0	--	--	.070	.57	.64	--	.020	.010
NOV 03, 1975	1.8	--	--	<.010	.49	.49	--	.020	<.010
OCT 21, 1976	1.4	.010	1.4	.070	.63	.70	2.1	.130	.040
OCT 19, 1977	1.6	.010	1.6	.040	.54	.58	2.2	.050	.010
OCT 30, 1978	1.8	.010	1.8	.040	.39	.43	2.2	.070	<.010
NOV 01, 1979	--	--	2.5	.090	.44	.53	3.0	.010	--
OCT 30, 1980	2.0	.010	2.0	.050	.08	.13	2.1	.030	.010

## 01472174 - PICKERING CREEK NEAR CHESTER SPRINGS, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL, RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL, RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL, RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL, RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	--	--	--	--	--	--	--	--
SEP , 1970	--	<100	--	<200	--	<250	--	<150	--	--
MAY , 1971	--	<100	--	<900	--	<250	--	<100	--	--
SEP , 1971	--	<150	--	<200	--	<250	--	300	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1973	--	<100	--	<200	--	<250	--	<500	--	--
OCT , 1974	<2	--	ND	--	ND	--	ND	200	--	ND
NOV , 1975	ND	--	ND	--	ND	--	ND	--	120	<2
OCT , 1976	ND	--	ND	--	ND	--	ND	--	20	<2
OCT , 1977	<2	--	<20	--	2	--	<20	--	220	4
OCT , 1978	ND	--	<2	--	ND	--	2	--	130	7
NOV , 1979	ND	--	ND	--	<2	--	<2	--	640	2
OCT , 1980	--	10	--	--	--	10	--	--	--	--
30...	4	--	1	--	0	--	0	--	120	3

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, CHARGE, SUS- PENDE (T/DAY)
OCT , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1970	--	--	--	--	--	--	--	--	--	--
SEP , 1970	<100	<250	--	<250	--	<50	--	--	6	.15
MAY , 1971	<50	<250	--	<250	--	<20	--	--	2	.02
SEP , 1971	<50	<250	--	<250	--	<20	--	--	8	.17
OCT , 1972	50	<250	--	<250	--	<50	--	--	6	.18
OCT , 1973	<50	<250	--	<250	--	<40	--	--	7	.07
OCT , 1974	--	30	--	--	ND	--	<20	--	--	--
NOV , 1975	--	--	40	--	2	--	<20	--	--	--
OCT , 1976	--	--	40	--	3	--	<20	--	--	--
OCT , 1977	--	--	80	--	5	--	20	--	--	--
OCT , 1978	--	--	70	--	2	--	<20	.00	--	--
NOV , 1979	--	--	60	--	<2	--	<20	.00	--	--
OCT , 1980	--	--	--	--	--	10	--	--	--	--
30...	--	--	50	--	0	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

014721854 - PICKERING CREEK AT MERLIN, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sub>d</sub>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV 10, 1969	--	84215 <sub>a</sub> /	24	175	7.0	12.0	--	--	--	--
FEB 18, 1970	--	84215	27	120	7.3	5.0	--	6	--	2
MAY 05, 1970	--	84215	29	109	8.7	16.0	--	8	--	<1
SEP 28, 1970	--	84215	11	120	8.4	14.0	--	>300000.0	--	3000
MAY 03, 1971	--	84215	22	160	8.3	13.5	--	1000	130	41
SEP 27, 1971	--	84215	28	155	7.3	15.0	--	32000	440	1200
OCT 03, 1972	1105	84215	18	149	6.1	12.0	--	6800	120	1100
OCT 02, 1973	0955	1028 <sub>b</sub> /	--	190	6.9	15.0	11.6	17000.	200	1000
OCT 23, 1974	1315	1028	--	125	8.2	8.5	10.4	--	--	--
NOV 03, 1975	1100	1028	--	200	7.7	12.5	11.8	--	--	--
OCT 22, 1976	0815	1028	--	180	7.2	8.5	11.2	--	--	--
OCT 19, 1977	1130	80010 <sub>c</sub> /	--	190	7.1	10.5	10.5	--	--	--
OCT 19, 1978	1500	80010	--	245	7.2	10.0	11.2	--	--	--
NOV 30, 1979	1500	80010	--	173	6.5	9.0	12.2	--	--	--
OCT 30, 1980	0900	80010	--	210	7.4	7.0	11.7	--	--	--

DATE	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV 10, 1969	--	--	--	--	--	--	--	--	--	--
FEB 18, 1970	--	--	--	--	--	--	--	--	--	--
MAY 05, 1970	--	--	15	--	5.6	--	8.1	--	1.4	--
SEP 28, 1970	--	--	17	--	2.9	--	4.5	--	2.2	--
MAY 03, 1971	--	--	16	--	4.8	--	7.1	--	1.2	--
SEP 27, 1971	--	--	15	--	4.6	--	7.1	--	2.2	--
OCT 03, 1972	--	--	16	--	4.0	--	5.4	--	1.5	--
OCT 02, 1973	61	19	--	16	--	5.2	--	9.0	--	2.4
OCT 23, 1974	66	23	--	18	--	5.2	--	6.4	--	2.0
NOV 03, 1975	77	35	--	21	--	6.0	--	6.6	--	2.0
OCT 22, 1976	60	26	--	15	--	5.4	--	6.0	--	3.2
OCT 19, 1977	69	36	--	18	--	5.9	--	7.0	--	2.8
OCT 19, 1978	73	30	--	20	--	5.6	--	6.9	--	2.2
NOV 30, 1979	--	--	--	--	--	--	--	--	--	--
OCT 30, 1980	75	--	--	20	--	6.1	--	7.3	--	2.2

<sub>a</sub>/ Chester County Health Department Laboratory, Pennsylvania.

<sub>b</sub>/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

<sub>c</sub>/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

<sub>d</sub>/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

## 014721854 - PICKERING CREEK AT MERLIN, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
FEB 10... 1970	--	--	--	15	26	--	--	--	98	--
MAY 18... 1970	--	--	--	18	8.4	--	--	--	101	--
SEP 05... 1970	--	--	--	14	11	--	--	--	129	--
MAY 28... 1971	--	--	--	14	12	--	--	--	167	--
SEP 03... 1971	--	--	--	11	14	--	--	--	118	--
OCT 27... 1972	--	--	--	29	11	--	--	--	105	--
OCT 03... 1973	52	0	43	13	13	.20	19	--	--	103
OCT 02... 1974	52	0	43	15	14	.10	18	109	--	100
NOV 23... 1975	51	0	42	16	14	.20	17	128	--	110
OCT 03... 1976	42	0	34	19	15	.10	16	108	--	100
OCT 22... 1977	40	0	33	20	15	.10	17	134	--	110
OCT 19... 1978	52	0	43	15	16	.10	18	117	--	110
NOV 30... 1979	--	--	34	17	14	.10	17	--	--	--
OCT 05... 1980	--	--	--	22	17	.00	20	130	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
NOV , 1969	--	--	--	--	--	--	--	--	--
FEB 10... 1970	.36	--	--	--	--	--	--	--	.020
MAY 18... 1970	1.1	--	--	--	--	--	--	--	<.010
SEP 05... 1970	.83	<.010	--	--	--	--	--	.010	--
MAY 28... 1971	.95	.010	--	.020	.07	--	--	.070	<.010
SEP 03... 1971	1.6	<.010	--	.050	.24	--	--	.110	<.010
OCT 27... 1972	1.6	<.010	--	.010	.07	--	--	.020	<.010
OCT 03... 1973	1.6	.001	1.6	.12	.72	.84	--	.03	.02
OCT 02... 1974	1.6	--	--	.070	.90	.97	--	.040	.020
NOV 23... 1975	1.5	--	--	<.010	.54	.54	--	.040	.030
OCT 03... 1976	1.1	.020	1.1	.060	.29	.35	1.5	.040	.020
OCT 22... 1977	1.3	<.010	1.3	<.010	.36	.36	1.7	.030	.010
OCT 19... 1978	1.2	.010	1.2	.040	.13	.17	1.4	.010	<.010
NOV 30... 1979	--	--	1.6	.010	.14	.15	1.8	.010	--
OCT 05... 1980	1.4	.000	1.4	.040	.15	.19	1.6	.020	.010

## 014721854 - PICKERING CREEK AT MERLIN, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1971	--	--	--	--	--	--	--	--	--	--
SEP , 1971	--	<100	--	<900	--	<250	--	<100	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1973	--	<100	--	<200	--	<250	--	<500	--	--
OCT , 1974	<2	--	ND	--	ND	--	<20	120	--	2.0
NOV , 1975	ND	--	ND	--	ND	--	ND	--	140	2
OCT , 1976	ND	--	ND	--	ND	--	ND	--	120	4
OCT , 1977	<2	--	<20	--	ND	--	<20	--	150	250
OCT , 1978	ND	--	<2	--	ND	--	2	--	170	7
NOV , 1979	<2	--	ND	--	ND	--	<2	--	170	2
OCT , 1980	--	10	--	--	--	0	--	--	--	--
30...	4	--	1	--	0	--	1	--	110	4

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1971	--	<250	--	--	--	--	--	--	7	.55
SEP , 1971	<50	<250	--	<250	--	<20	--	--	3	.09
OCT , 1972	<50	<250	--	<250	--	<20	--	--	4	.24
OCT , 1973	<50	<250	--	<250	--	<50	--	--	3	.23
OCT , 1974	<50	<250	--	<250	--	<20	--	--	6	.30
OCT , 1975	--	20	--	--	ND	--	<20	--	--	--
NOV , 1975	--	--	40	--	5	--	<20	--	--	--
OCT , 1976	--	--	40	--	4	--	<20	--	--	--
OCT , 1977	--	--	80	--	4	--	<20	--	--	--
OCT , 1978	--	--	50	--	2	--	ND	.00	--	--
NOV , 1979	--	--	20	--	<2	--	ND	.00	--	--
OCT , 1980	--	--	--	--	--	0	--	--	--	--
30...	--	--	40	--	0	--	04	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

014721884 - PICKERING CREEK AT CHARLESTOWN ROAD BRIDGE AT CHARLESTOWN, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sub>d</sub>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV , 1969										
11 . . .	--	84215 <sub>a</sub> /	18	175	7.0	18.0	--	21	--	<1
FEB . . .	--	84215	41	120	7.0	4.0	--	<1	--	<1
18 . . .										
MAY . . .	--	84215	25	160	8.2	11.5	--	<1000	140	<10
03 . . .										
SEP . . .	--	84215	49	160	7.4	15.0	--	27000	400	760
27 . . .										
OCT . . .	1215	84215	24	142	6.6	15.0	--	2600	230	800
03 . . .										
OCT . . .	1225	1028 <sub>b</sub> /	--	195	7.1	15.0	13.4	16000	72	460
01 . . .										
OCT . . .	1230	1028	--	130	7.7	9.0	11.1	--	--	--
23 . . .										
NOV . . .	1245	1028	--	190	7.8	14.0	12.0	--	--	--
03 . . .										
OCT . . .	0945	1028	--	180	7.2	9.0	11.8	--	--	--
22 . . .										
OCT . . .	1200	80010 <sub>c</sub> /	--	195	7.2	11.0	10.7	--	--	--
19 . . .										
OCT . . .	1530	80010	--	270	7.3	10.0	12.8	--	--	--
30 . . .										
OCT . . .	1400	80010	--	230	7.6	10.5	12.1	--	--	--
29 . . .										
OCT . . .	1440	80010	--	240	7.1	10.0	11.5	--	--	--
29 . . .										

DATE	HARD- NESS (MG/L AS CACO <sub>3</sub> )	HARD- NESS, NONCAR- BONATE (MG/L CACO <sub>3</sub> )	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
11 . . .										
FEB . . .	--	--	--	--	--	--	--	--	--	--
18 . . .										
MAY . . .	--	--	16	--	5.2	--	6.9	--	1.3	--
03 . . .										
SEP . . .	--	--	14	--	4.5	--	6.9	--	2.1	--
27 . . .										
OCT . . .	--	--	16	--	4.2	--	5.8	--	1.5	--
03 . . .										
OCT . . .	65	25	--	17	--	5.5	--	6.7	--	2.1
01 . . .										
OCT . . .	65	24	--	17	--	5.4	--	6.6	--	2.0
23 . . .										
NOV . . .	71	28	--	19	--	5.6	--	6.9	--	2.1
03 . . .										
OCT . . .	61	27	--	15	--	5.6	--	6.1	--	3.5
22 . . .										
OCT . . .	74	40	--	19	--	6.4	--	7.3	--	2.8
19 . . .										
OCT . . .	77	33	--	21	--	6.0	--	7.0	--	2.3
30 . . .										
OCT . . .	--	--	--	--	--	--	--	--	--	--
29 . . .										
OCT . . .	76	--	--	20	--	6.3	--	7.8	--	2.5
29 . . .										

a/ Chester County Health Department Laboratory, Pennsylvania.  
 b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.  
 c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.  
 d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

014721884 - PICKERING CREEK AT CHARLESTOWN ROAD BRIDGE AT CHARLESTOWN, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
NOV , 1969										
11... 1969	--	--	--	11	10	--	--	--	--	--
FEB , 1970										
18... 1970	--	--	--	7.7	25	--	--	--	--	--
MAY , 1971										
03... 1971	--	--	--	16	10	--	--	--	105	--
SEP , 1971										
27... 1971	--	--	--	14	12	--	--	--	132	--
OCT , 1972										
03... 1972	--	--	--	21	12	--	--	--	105	--
OCT , 1973										
01... 1973	49	0	40	15	14	.70	17	--	--	102
OCT , 1974										
23... 1974	50	0	41	15	14	.20	18	115	--	100
NOV , 1975										
03... 1975	52	0	43	16	15	.10	17	115	--	110
OCT , 1976										
22... 1976	41	0	34	19	15	.10	16	113	--	100
OCT , 1977										
19... 1977	41	0	34	21	15	.10	18	129	--	110
OCT , 1978										
30... 1978	54	0	44	16	20	.10	18	127	--	120
OCT , 1979										
29... 1979	--	--	35	--	--	.10	18	--	--	--
OCT , 1980										
29... 1980	--	--	--	26	18	.00	19	138	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
NOV , 1969									
11... 1969	.16	--	--	--	--	--	--	--	.140
FEB , 1970									
18... 1970	.41	--	--	--	--	--	--	--	--
MAY , 1971									
03... 1971	1.5	.010	--	--	.17	--	--	.140	<.010
SEP , 1971									
27... 1971	1.8	<.010	--	.030	.64	--	--	.040	.010
OCT , 1972									
03... 1972	1.6	<.010	--	.010	.10	--	--	.040	<.010
OCT , 1973									
01... 1973	1.6	--	--	.070	.93	1.0	--	.390	.390
OCT , 1974									
23... 1974	1.5	--	--	.100	.72	.82	--	.030	.020
NOV , 1975									
03... 1975	1.4	--	--	<.010	.47	.47	--	.030	.020
OCT , 1976									
22... 1976	.67	.010	.68	.050	.15	.20	.88	.040	.030
OCT , 1977									
19... 1977	1.2	<.010	1.2	<.010	.78	.78	2.0	.030	.010
OCT , 1978									
30... 1978	1.1	.010	1.1	.010	.28	.29	1.4	.020	.010
OCT , 1979									
29... 1979	--	--	1.6	.010	1.6	1.6	3.2	.200	--
OCT , 1980									
29... 1980	1.4	.000	1.4	.030	.26	.29	1.7	.020	.010



## 014721884 - PICKERING CREEK AT CHARLESTOWN ROAD BRIDGE AT CHARLESTOWN, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1971	--	<150	--	<200	--	<250	--	320	--	--
SEP , 1971	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	<500	--	--
OCT , 1973	3	--	ND	--	<2	--	20	280	--	4
OCT , 1974	ND	--	ND	--	ND	--	<20	--	150	2
NOV , 1975	<2	--	ND	--	2	--	<20	--	100	3
OCT , 1976	<2	--	<20	--	ND	--	ND	--	180	79
OCT , 1977	ND	--	<2	--	ND	--	2	--	180	7
OCT , 1978	ND	--	ND	--	ND	--	<2	--	150	<2
OCT , 1979	--	10	--	--	--	10	--	--	--	--
OCT , 1980	3	--	1	--	0	--	0	--	100	3

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV , 1969	--	--	--	--	--	--	--	--	--	--
FEB , 1970	--	--	--	--	--	--	--	--	--	--
MAY , 1971	<50	<250	--	<250	--	<20	--	--	4	.27
SEP , 1971	<50	<250	--	<250	--	<50	--	--	3	.40
OCT , 1972	<50	<250	--	<250	--	<20	--	--	5	.33
OCT , 1973	--	40	--	--	2	--	30	--	--	--
OCT , 1974	--	--	40	--	2	--	<20	--	--	--
NOV , 1975	--	--	30	--	3	--	<20	--	--	--
OCT , 1976	--	--	80	--	2	--	<20	--	--	--
OCT , 1977	--	--	40	--	2	--	ND	.00	--	--
OCT , 1978	--	--	<10	--	ND	--	<20	.00	--	--
OCT , 1979	--	--	--	--	--	10	--	--	--	--
OCT , 1980	--	--	40	--	0	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01472190 - PICKERING CREEK NEAR PHOENIXVILLE, PA a/

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW/ INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (US/CM) <u>e/</u>	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, (COLS. PER 100 ML)
NOV 12, 1969	--	84215 <u>b/</u>	17	165	7.5	8.0	--	1900	--	<1
FEB 18, 1970	--	84215	45	150	7.2	4.0	--	21	--	2
MAY 05, 1970	--	84215	46	109	8.8	17.0	--	20	--	2
SEP 28, 1970	--	84215	19	125	8.0	15.0	--	21000	--	2500
MAY 03, 1971	--	84215	30	165	8.2	11.5	--	<1000	260	180
SEP 27, 1971	--	84215	74	150	7.5	15.0	--	15000	410	720
OCT 23, 1971	1100	--	--	--	--	--	--	--	--	--
OCT 03, 1972	1300	84215	32	150	6.7	15.0	--	2100	90	420
OCT 01, 1973	1405	1028 <u>e/</u>	26	200	7.9	16.5	13.6	18700	36	190
OCT 23, 1974	1100	1028	26	185	7.6	6.5	11.0	--	--	--
NOV 03, 1975	1400	1028	--	200	7.3	15.0	11.6	--	--	--
OCT 22, 1976	1030	1028	--	190	7.4	9.0	12.2	--	--	--
OCT 19, 1977	1415	1028	--	200	7.3	12.5	11.2	--	--	--
OCT 30, 1978	1600	80010 <u>d/</u>	--	280	7.2	11.0	12.0	--	--	--
OCT 29, 1979	1515	80010	--	180	7.7	10.5	12.0	--	--	--
OCT 30, 1980	1445	80010	12	226	7.3	11.0	11.7	--	--	--

DATE	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)	CALCIUM TOTAL RECOVERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOVERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOVERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOVERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV 12, 1969	--	--	--	--	--	--	--	--	--	--
FEB 18, 1970	--	--	--	--	--	--	--	--	--	--
MAY 05, 1970	--	--	14	--	5.0	--	6.6	--	1.5	--
SEP 28, 1970	--	--	17	--	5.3	--	7.1	--	3.1	--
MAY 03, 1971	--	--	16	--	5.3	--	7.5	--	1.3	--
SEP 27, 1971	--	--	15	--	5.1	--	7.2	--	2.1	--
OCT 23, 1971	68	25	--	18	--	5.6	--	7.0	--	1.7
OCT 03, 1972	--	--	16	--	4.2	--	5.8	--	1.4	--
OCT 01, 1973	63	24	--	16	--	5.5	--	7.2	--	2.2
OCT 23, 1974	68	25	--	18	--	5.6	--	7.0	--	1.7
NOV 03, 1975	74	32	--	19	--	6.5	--	7.0	--	2.1
OCT 22, 1976	60	26	--	15	--	5.5	--	6.1	--	3.5
OCT 19, 1977	75	36	--	19	--	6.6	--	7.6	--	2.8
OCT 30, 1978	71	33	--	19	--	5.8	--	6.5	--	2.3
OCT 29, 1979	--	--	--	--	--	--	--	--	--	--
OCT 30, 1980	83	--	--	22	--	6.9	--	8.2	--	2.5

a/ Additional data are available from 1967 to 1969.

b/ Chester County Health Department Laboratory, Pennsylvania.

c/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

d/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

e/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

## 01472190 - PICKERING CREEK NEAR PHOENIXVILLE, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF, CONSTITUENTS, DIS- SOLVED (MG/L)
NOV , 1969										
12...	--	--	--	12	10	--	--	--	--	--
FEB , 1970										
18...	--	--	--	18	20	--	--	--	--	--
MAY										
05...	--	--	--	19	7.4	--	--	--	114	--
SEP										
28...	--	--	--	4.1	12	--	--	--	122	--
MAY , 1971										
03...	--	--	--	17	10	--	--	--	104	--
SEP										
27...	--	--	--	15	14	--	--	--	134	--
OCT										
23...	--	--	--	18	14	.20	17	124	--	110
OCT , 1972										
03...	--	--	--	31	12	--	--	--	103	--
OCT , 1973										
01...	48	<0	39	16	14	.70	17	--	--	102
OCT , 1974										
23...	53	0	43	18	14	.20	17	124	--	108
NOV , 1975										
03...	51	0	42	17	15	.20	16	125	--	110
OCT , 1976										
22...	42	0	34	21	13	.10	16	118	--	100
OCT , 1977										
19...	48	0	39	22	17	.10	17	--	--	120
OCT , 1978										
30...	46	0	38	14	20	.10	19	128	--	110
OCT , 1979										
29...	--	--	35	19	17	.10	18	--	--	--
OCT , 1980										
30...	--	--	--	26	20	.00	20	141	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
NOV , 1969									
12...	.15	--	--	--	--	--	--	--	--
FEB , 1970									
18...	.38	--	--	--	--	--	--	--	--
MAY									
05...	.25	--	--	--	--	--	--	--	--
SEP									
28...	.85	.010	--	--	--	--	--	.010	--
MAY , 1971									
03...	.84	.020	--	.110	.03	--	--	.050	<.010
SEP									
27...	1.3	<.010	--	.010	.18	--	--	.060	.010
OCT									
23...	--	--	--	--	--	--	--	--	.020
OCT , 1972									
03...	1.6	.000	--	.010	.07	--	--	.030	.010
OCT , 1973									
01...	1.3	<.010	1.3	.050	.63	.68	2.0	.030	.020
OCT , 1974									
23...	1.6	--	--	.120	.73	.85	--	.030	.020
NOV , 1975									
03...	1.4	--	--	<.010	.66	.66	--	.030	.020
OCT , 1976									
22...	.73	.010	.74	.050	.25	.30	1.0	.040	.030
OCT , 1977									
19...	1.2	<.010	1.2	<.010	.42	.42	1.6	.030	.010
OCT , 1978									
30...	1.8	.010	1.8	.060	.17	.23	2.0	.030	.020
OCT , 1979									
29...	--	--	1.6	.000	.36	.36	2.0	.010	--
OCT , 1980									
30...	1.5	.000	1.5	.040	.05	.05	1.6	.020	.010

## 01472190 - PICKERING CREEK NEAR PHOENIXVILLE, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV 12, 1969	--	--	--	--	--	--	--	--	--	--
FEB 18, 1970	--	--	--	--	--	--	--	--	--	--
MAY 05, 1971	--	<100	--	<200	--	<250	--	<150	--	--
SEP 28, 1971	--	<100	--	<900	--	<250	--	<100	--	--
MAY 03, 1971	--	<150	--	<200	--	<250	--	200	--	--
SEP 27, 1971	--	<100	--	<200	--	<250	--	<150	--	--
OCT 23, 1971	--	--	--	--	--	--	--	--	120	2
OCT 03, 1972	--	<100	--	<200	--	<250	--	<500	--	--
OCT 01, 1973	ND	--	30	--	<2	--	<20	190	--	2
OCT 23, 1974	ND	--	ND	--	ND	--	ND	--	120	2
NOV 03, 1975	ND	--	ND	--	ND	--	ND	--	40	<2
OCT 22, 1976	<2	--	<20	--	ND	--	ND	--	160	ND
OCT 19, 1977	ND	--	<2	--	ND	--	3	--	150	9
OCT 30, 1978	ND	--	ND	--	ND	--	<2	--	260	3
OCT 29, 1979	--	20	--	--	--	10	--	--	--	--
OCT 30, 1980	3	--	1	--	0	--	0	--	70	3
DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV 12, 1969	--	--	--	--	--	--	--	--	--	--
FEB 18, 1970	--	--	--	--	--	--	--	--	19	2.3
MAY 05, 1971	<100	<250	--	<250	--	<50	--	--	5	.62
SEP 28, 1971	<50	<250	--	<250	--	<20	--	--	4	.21
MAY 03, 1971	<50	<250	--	<250	--	<20	--	--	4	.32
SEP 27, 1971	<50	<250	--	<250	--	<50	--	--	3	.60
OCT 23, 1971	--	--	--	--	3	--	--	--	--	--
OCT 03, 1972	<50	80	--	<250	--	<20	--	--	4	.35
OCT 01, 1973	--	<10	--	--	ND	--	20	--	--	--
OCT 23, 1974	--	--	<10	--	3	--	<20	--	--	--
NOV 03, 1975	--	--	20	--	2	--	<20	--	--	--
OCT 22, 1976	--	--	70	--	4	--	20	--	--	--
OCT 19, 1977	--	--	20	--	3	--	<20	.00	--	--
OCT 30, 1978	--	--	30	--	ND	--	<20	.00	--	--
OCT 29, 1979	--	--	--	--	--	0	--	--	--	--
OCT 30, 1980	--	--	10	--	0	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01473167 - LITTLE VALLEY CREEK AT HOWELLVILLE, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sup>d</sup>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV , 1971										
09...	--	84215 <sup>a</sup>	--	425	7.7	6.0	--	4600	36	80
NOV , 1972										
24...	1120	84215	--	420	8.4	14.0	--	550	180	92
OCT , 1973										
12...	0905	1028 <sup>b</sup>	--	520	7.8	11.5	11.0	49000	760	180
OCT , 1974										
23...	0930	1028	--	350	7.7	6.5	10.4	--	--	--
NOV , 1975										
11...	0900	1028	--	480	7.1	10.0	11.6	--	--	--
OCT , 1976										
29...	0900	1028	--	580	7.7	7.0	12.0	--	--	--
OCT , 1977										
31...	1400	80010 <sup>c</sup>	--	510	8.4	12.5	13.2	--	--	--
OCT , 1978										
27...	1345	80010	--	750	8.0	12.0	11.0	--	--	--
DEC , 1978										
28...	1130	80010	--	550	7.8	3.0	--	--	--	--
NOV , 1979										
05...	1000	80010	--	476	7.7	8.5	11.6	--	--	--
OCT , 1980										
31...	0910	80010	--	534	7.7	7.0	11.9	--	--	--

DATE	HARD- NESS (MG/L AS CACO <sub>3</sub> )	HARD- NESS NONCAR- BONATE (MG/L CACO <sub>3</sub> )	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV , 1971										
09...	--	--	45	--	16	--	19	--	2.2	--
NOV , 1972										
24...	--	--	40	--	14	--	26	--	2.4	--
OCT , 1973										
12...	190	56	--	49	--	17	--	28	--	3.1
OCT , 1974										
23...	200	54	--	51	--	18	--	27	--	2.4
NOV , 1975										
11...	190	54	--	48	--	17	--	24	--	2.7
OCT , 1976										
29...	220	66	--	54	--	20	--	28	--	3.0
OCT , 1977										
31...	220	55	--	57	--	20	--	32	--	3.1
OCT , 1978										
27...	240	44	--	45	--	32	--	21	--	3.1
DEC , 1978										
28...	--	--	--	--	--	--	--	--	--	--
NOV , 1979										
05...	--	--	--	--	--	--	--	--	--	--
OCT , 1980										
31...	200	--	--	52	--	18	--	26	--	2.2

<sup>a</sup>/ Chester County Health Department Laboratory, Pennsylvania.

<sup>b</sup>/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

<sup>c</sup>/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

<sup>d</sup>/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01473167 - LITTLE VALLEY CREEK AT HOWELLVILLE, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
NOV , 1971	--	--	--	36	42	--	--	--	238	--
NOV , 1972	--	--	--	36	51	--	--	--	299	--
OCT , 1973	170	0	137	39	47	.50	6.5	--	--	272
OCT , 1974	180	0	148	38	47	.40	7.1	297	--	280
NOV , 1975	170	0	136	31	42	.20	7.8	274	--	250
OCT , 1976	180	0	151	41	50	.20	8.5	314	--	300
OCT , 1977	210	0	170	43	55	.20	7.5	343	--	320
OCT , 1978	240	0	200	45	34	.10	7.5	320	--	310
DEC , 1978	--	--	--	--	--	--	--	--	--	--
NOV , 1979	--	--	140	32	33	.30	7.2	--	--	--
OCT , 1980	--	--	--	33	47	.10	7.5	303	--	--

DATE	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
NOV , 1971	3.4	.030	--	.050	.28	--	--	.050	.050
NOV , 1972	3.2	.060	--	.020	.33	--	--	.220	.180
OCT , 1973	3.6	.005	3.6	.040	.36	.40	4.0	.220	.190
OCT , 1974	3.1	--	--	.190	1.1	1.3	--	.190	.170
NOV , 1975	4.3	--	--	.010	.54	.55	--	.130	.110
OCT , 1976	3.5	.050	3.5	.060	.34	.40	3.9	.190	.170
OCT , 1977	3.5	.030	3.5	.040	.35	.39	3.9	.170	.150
OCT , 1978	1.9	.020	1.9	.010	.30	.31	2.2	.030	.010
DEC , 1978	--	--	--	--	--	--	--	--	--
NOV , 1979	--	--	3.0	.060	.19	.25	3.3	.060	--
OCT , 1980	2.6	.000	2.6	.030	.20	.23	2.8	.100	.010

## 01473167 - LITTLE VALLEY CREEK AT HOWELLVILLE, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1971	--	<100	--	<200	--	<250	--	<150	--	--
NOV 09 , 1972	--	<100	--	<200	--	<250	--	230	--	--
NOV 24 , 1973	--	<100	--	<200	--	<250	--	230	--	--
OCT 12 , 1973	ND	--	<20	--	ND	--	ND	--	30	2
OCT 23 , 1974	ND	--	ND	--	ND	--	<20	--	<10	<2
NOV 11 , 1975	<2	--	ND	--	<2	--	ND	--	<10	3
OCT 29 , 1976	<2	--	<20	--	ND	--	<20	--	20	3
OCT 31 , 1977	ND	--	2	--	ND	--	3	--	30	2
OCT 27 , 1978	2	--	2	--	5	--	<2	--	170	13
DEC 28 , 1978	--	--	--	--	--	--	--	--	--	--
NOV 05 , 1979	--	10	--	--	--	10	--	--	--	--
OCT 31 , 1980	1	--	3	--	0	--	0	--	10	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
NOV , 1971	<50	<250	--	<250	--	<50	--	--	--	--
NOV 09 , 1972	<50	<250	--	<250	--	<20	--	--	--	--
NOV 24 , 1973	--	--	60	--	8	--	50	--	--	--
OCT 12 , 1973	--	--	30	--	4	--	<20	--	--	--
OCT 23 , 1974	--	--	20	--	5	--	30	--	--	--
NOV 11 , 1975	--	--	40	--	2	--	20	--	--	--
OCT 29 , 1976	--	--	30	--	ND	--	<20	.10	--	--
OCT 31 , 1977	--	--	20	--	<2	--	ND	.00	--	--
OCT 27 , 1978	--	--	--	--	--	--	--	--	--	--
DEC 28 , 1978	--	--	--	--	--	--	--	--	--	--
NOV 05 , 1979	--	--	--	--	--	20	--	--	--	--
OCT 31 , 1980	--	--	7	--	0	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01473168 - VALLEY CREEK NEAR VALLEY FORGE, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sub>d</sub>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV , 1971	--	84215 <sub>a</sub> /	--	440	7.7	6.5	--	6800	40	130
OCT , 1972	0715	84215	--	390	8.3	12.5	--	500	150	200
OCT , 1973	0835	1028 <sub>b</sub> /	--	520	7.8	12.0	10.8	8000	420	220
OCT , 1974	1015	1028	--	355	7.5	7.0	11.4	--	--	--
NOV , 1975	1030	1028	--	520	8.1	11.5	11.0	--	--	--
OCT , 1976	0945	1028	--	580	8.0	7.0	12.0	--	--	--
OCT , 1977	1430	80010 <sub>c</sub> /	--	540	8.2	11.0	12.4	--	--	--
OCT , 1978	1300	80010	--	520	6.4	13.0	12.6	--	--	--
NOV , 1979	1100	80010	--	553	7.2	8.0	12.8	--	--	--
OCT , 1980	1030	80010	--	604	7.8	7.5	12.8	--	--	--

DATE	HARD- NESS (MG/L AS CACO <sub>3</sub> )	HARD- NESS, NONCAR- BONATE (MG/L CACO <sub>3</sub> )	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV , 1971	--	--	42	--	26	--	19	--	2.6	--
OCT , 1972	--	--	38	--	24	--	19	--	2.5	--
OCT , 1973	241	6	--	30	--	30	--	20	--	3.0
OCT , 1974	220	38	--	43	--	28	--	20	--	2.2
NOV , 1975	240	47	--	48	--	28	--	20	--	3.0
OCT , 1976	260	63	--	46	--	35	--	22	--	3.1
OCT , 1977	280	69	--	49	--	38	--	24	--	3.2
OCT , 1978	190	63	--	51	--	16	--	29	--	2.8
NOV , 1979	--	--	--	--	--	--	--	--	--	--
OCT , 1980	240	--	--	44	--	31	--	29	--	3.2

<sup>a</sup>/ Chester County Health Department Laboratory, Pennsylvania.

<sup>b</sup>/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

<sup>c</sup>/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

<sup>d</sup>/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).



## 01473168 - VALLEY CREEK NEAR VALLEY FORGE, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS RESIDUE AT 105 DEG C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
NOV , 1971	--	--	--	32	27	--	--	--	245	--
OCT 09, 1972	--	--	--	31	27	--	--	--	267	--
OCT 12, 1973	240	0	193	33	30	.20	5.8	--	--	270
OCT 23, 1974	230	0	185	34	29	.20	6.3	284	--	270
NOV 11, 1975	230	0	188	30	31	.10	7.6	291	--	280
OCT 29, 1976	240	0	196	35	34	.10	7.6	308	--	300
OCT 31, 1977	250	0	210	69	38	.10	7.2	336	--	350
OCT 31, 1978	160	0	130	40	55	.50	6.9	311	--	280
NOV 05, 1979	--	--	190	39	33	.10	7.1	--	--	--
OCT 31, 1980	--	--	--	43	46	.00	7.3	333	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
NOV , 1971	2.1	.030	--	.210	.23	--	--	.010	.020
OCT 24, 1972	2.1	.010	--	.020	.22	--	--	.060	.030
OCT 12, 1973	2.0	.005	2.0	--	.26	--	--	.040	.010
OCT 23, 1974	2.0	--	--	.080	1.1	1.2	--	.080	.040
NOV 11, 1975	2.7	--	--	.010	.54	.55	--	.070	.020
OCT 29, 1976	1.9	.010	1.9	.030	.17	.20	2.1	.050	.030
OCT 31, 1977	1.7	.010	1.7	.110	.44	.55	2.3	.040	.020
OCT 27, 1978	2.8	.020	2.8	.100	.27	.37	3.2	.130	.100
NOV 05, 1979	--	--	2.1	.060	.20	.26	2.4	.020	--
OCT 31, 1980	2.0	.020	2.0	.140	.23	.37	2.4	.070	.030

## 01473168 - VALLEY CREEK NEAR VALLEY FORGE, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1971	--	<100	--	<200	--	<250	--	<150	--	--
OCT 09... 1972	--	<100	--	<250	--	<250	--	500	--	--
OCT 24... 1973	ND	--	<20	--	ND	--	ND	--	20	2
OCT 12... 1974	ND	--	ND	--	ND	--	<20	--	20	<2
NOV 23... 1975	<2	--	ND	--	<2	--	ND	--	<10	4
OCT 11... 1976	<2	--	<20	--	ND	--	<20	--	20	5
OCT 29... 1977	ND	--	<2	--	ND	--	9	--	120	<2
OCT 31... 1978	2	--	4	--	4	--	4	--	60	7
NOV 27... 1979	--	10	--	--	--	10	--	--	--	--
OCT 05... 1980	--	--	--	--	--	--	--	--	--	--
OCT 31... 1980	2	--	4	--	0	--	0	--	10	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
NOV , 1971	<100	<250	--	<250	--	<50	--	--	--	--
OCT 09... 1972	<50	<250	--	<250	--	<20	--	--	--	--
OCT 24... 1973	--	--	30	--	4	--	20	--	--	--
OCT 12... 1974	--	--	20	--	2	--	20	--	--	--
NOV 23... 1975	--	--	30	--	2	--	<20	--	--	--
OCT 11... 1976	--	--	30	--	3	--	<20	--	--	--
OCT 29... 1977	--	--	60	--	<2	--	<20	.00	--	--
OCT 31... 1978	--	--	<10	--	6	--	ND	.10	--	--
NOV 27... 1979	--	--	--	--	--	10	--	--	--	--
OCT 05... 1980	--	--	--	--	--	--	--	--	--	--
OCT 31... 1980	--	--	30	--	0	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01475300 - DARBY CREEK AT WATERLOO MILLS NEAR DEVON, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	STREAM- FLOW MEAN DAILY (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sub>d</sub> /	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
FEB , 1970											
10...	--	84215 <sub>a</sub> /	14	--	120	7.8	3.0	--	1600	--	830
MAY											
27...	--	84215	8.3	--	145	8.1	16.0	--	130	--	300
OCT											
06...	--	84215	2.3	--	145	7.6	14.0	--	830	--	160
MAY , 1971											
11...	--	84215	6.6	--	200	7.4	14.0	--	5000	150	52
OCT											
05...	--	84215	6.1	--	200	7.6	17.0	--	23000	250	260
JUN , 1972											
07...	1043	--	--	7.0	240	7.2	18.0	8.7	--	250	--
JUL											
12...	0925	--	--	7.6	245	7.8	22.0	9.5	--	370	--
AUG											
09...	0928	--	--	5.1	220	--	21.0	8.4	--	990	--
SEP											
13...	0944	--	--	4.4	240	4.9	17.0	8.2	--	200	--
OCT											
04...	1066	--	--	3.0	385	7.0	14.0	10.0	--	900	--
16...	0700	84215	4.1	3.4	200	7.2	9.0	--	1300	40	250
NOV											
15...	0955	--	--	17	220	6.9	7.0	11.0	--	2500	--
DEC											
06...	0945	--	--	29	240	6.9	9.0	11.9	--	400	--
JAN , 1973											
10...	0946	--	--	8.5	280	7.2	1.0	14.8	--	50000	--
FEB											
07...	1000	--	--	20	230	6.5	5.0	12.8	--	880	--
OCT											
04...	1245	1028 <sub>b</sub> /	4.1	4.4	220	6.5	17.5	11.2	44300	--	520
OCT , 1974											
22...	1330	1028	4.7	4.6	110	7.2	7.5	11.2	--	--	--
NOV , 1975											
07...	1430	1028	6.9	8.4	220	7.7	15.5	10.4	--	--	--
OCT , 1976											
28...	0845	1028	4.5	4.9	335	7.2	5.5	11.9	--	--	--
OCT , 1977											
31...	1130	80010 <sub>c</sub> /	4.5	4.5	230	7.4	11.0	11.2	--	--	--
OCT , 1978											
27...	1145	80010	4.7	4.8	320	7.4	11.5	10.0	--	--	--
OCT , 1979											
30...	1300	80010	10.0	9.9	210	7.2	10.5	11.8	--	--	--
OCT , 1980											
31...	1300	80010	4.0	2.4	275	6.8	8.5	10.7	--	--	--

<sub>a</sub>/ Chester County Health Department Laboratory, Pennsylvania.  
<sub>b</sub>/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.  
<sub>c</sub>/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.  
 Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01475300 - DARBY CREEK AT WATERLOO MILLS NEAR DEVON, PA--Continued

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
FEB , 1970										
10...	--	--	6.7	--	1.3	--	2.6	--	.5	--
MAY										
27...	--	--	13	--	6.1	--	8.8	--	2.0	--
OCT										
06...	--	--	--	--	7.6	--	16	--	3.4	--
MAY , 1971										
11...	--	--	17	--	7.8	--	12	--	2.0	--
OCT										
05...	--	--	18	--	7.5	--	12	--	2.5	--
JUN , 1972										
07...	--	--	--	--	--	--	--	--	--	--
JUL										
12...	--	--	--	--	--	--	--	--	--	--
AUG										
09...	--	--	--	--	--	--	--	--	--	--
SEP										
13...	--	--	--	--	--	--	--	--	--	--
OCT										
04...	--	--	--	--	--	--	--	--	--	--
16...	--	--	21	--	7.4	--	12	--	2.4	--
NOV										
15...	--	--	--	--	--	--	--	--	--	--
DEC										
06...	--	--	--	--	--	--	--	--	--	--
JAN , 1973										
10...	--	--	--	--	--	--	--	--	--	--
FEB										
07...	--	--	--	--	--	--	--	--	--	--
OCT										
04...	77	28	--	18	--	7.9	--	11	--	3.3
OCT , 1974										
22...	62	23	--	15	--	6.0	--	6.5	--	2.0
NOV , 1975										
07...	81	28	--	19	--	8.1	--	11	--	2.4
OCT , 1976										
28...	97	26	--	23	--	9.7	--	13	--	2.9
OCT , 1977										
31...	110	30	--	24	--	11	--	15	--	3.1
OCT , 1978										
27...	93	28	--	22	--	9.2	--	11	--	2.6
OCT , 1979										
30...	--	--	--	--	--	--	--	--	--	--
OCT , 1980										
31...	89	--	--	21	--	8.9	--	9.5	--	2.7

## 01475300 - DARBY CREEK AT WATERLOO MILLS NEAR DEVON, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO <sub>3</sub> )	CAR- BONATE FET-FLD (MG/L AS CO <sub>3</sub> )	ALKA- LINITY FIELD (MG/L AS CACO <sub>3</sub> )	SULFATE DIS- SOLVED (MG/L AS SO <sub>4</sub> )	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO <sub>2</sub> )	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C DIS- SOLVED (MG/L)
FEB , 1970	--	--	--	7.9	2.1	--	--	--	240
MAY 10...	--	--	--	7.9	11	--	--	--	162
OCT 27...	--	--	--	19	26	--	--	--	146
MAY 11, 1971	--	--	--	34	14	--	--	--	144
OCT 05...	--	--	--	15	16	--	--	--	153
JUN , 1972	--	--	--	--	--	--	--	--	--
JUL 07...	--	--	--	--	--	--	--	--	--
AUG 12...	--	--	--	--	--	--	--	--	--
SEP 09...	--	--	--	--	--	--	--	--	--
OCT 13...	--	--	--	--	--	--	--	--	--
NOV 04...	--	--	--	--	--	--	--	--	--
DEC 16...	--	--	--	26	18	--	--	--	142
JAN 15, 1972	--	--	--	--	--	--	--	--	--
FEB 06...	--	--	--	--	--	--	--	--	--
MAY 10, 1973	--	--	--	--	--	--	--	--	--
OCT 07...	--	--	--	--	--	--	--	--	--
NOV 04...	61	0	50	21	15	.30	12	--	--
OCT 22, 1974	48	0	39	13	11	.10	18	101	--
NOV 07, 1975	65	0	53	18	17	.10	14	144	--
OCT 28, 1976	86	0	71	29	22	.10	17	169	--
OCT 31, 1977	91	0	75	22	23	.10	16	167	--
OCT 27, 1978	79	0	65	20	20	.10	13	148	--
OCT 30, 1979	--	--	34	18	17	.10	15	--	--
OCT 31, 1980	--	--	--	28	22	.10	16	157	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01475300 - DARBY CREEK AT WATERLOO MILLS NEAR DEVON, PA--Continued

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
FEB , 1970										
10...	--	.38	--	--	--	--	--	--	--	.070
MAY										
27...	--	2.2	--	--	--	--	--	--	--	.192
OCT										
06...	--	3.3	.030	--	--	--	--	--	.732	.771
MAY , 1971										
11...	--	2.4	.060	--	1.08	.26	--	--	.232	.173
OCT										
05...	--	2.9	.070	--	.010	.66	--	--	.370	.130
JUN , 1972										
07...	--	2.8	.125	--	.320	--	--	--	.300	--
JUL										
12...	--	3.4	.070	--	.260	--	--	--	.690	--
AUG										
09...	--	2.6	.060	--	.200	.12	--	--	.310	--
SEP										
13...	--	4.3	.075	--	.400	--	--	--	.400	--
OCT										
04...	--	4.4	.035	--	.280	--	--	--	.540	--
16...	--	3.0	.090	--	.330	.26	--	--	.440	.370
NOV										
15...	--	2.7	.012	--	.380	--	--	--	.150	--
DEC , 1972										
06...	--	2.8	.040	--	.300	--	--	--	1.72	--
JAN , 1973										
10...	--	3.4	.010	--	.400	--	--	--	.890	--
FEB										
07...	--	2.8	.010	--	.310	--	--	--	.110	--
OCT										
04...	120	3.2	--	--	.100	.52	.62	--	.300	.250
OCT , 1974										
22...	95	2.0	--	--	.060	.62	.68	--	.020	.010
NOV , 1975										
07...	120	2.5	--	--	.010	.72	.73	--	.230	.200
OCT , 1976										
28...	160	2.0	.070	2.1	.410	.14	.55	2.7	.290	.220
OCT , 1977										
31...	160	2.6	.010	2.6	.050	.38	.43	3.0	.270	.250
OCT , 1978										
27...	140	2.0	.020	2.0	.070	.43	.50	2.5	.040	.020
OCT , 1979										
30...	--	--	--	2.3	.070	.58	.65	3.0	.110	--
OCT , 1980										
31...	--	1.5	.010	1.5	.040	.04	.08	1.6	.050	.030

## 01475300 - DARBY CREEK AT WATERLOO MILLS NEAR DEVON, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
FEB , 1970	--	<100	--	<200	--	<250	--	<150	--	--
10...	--	--	--	--	--	--	--	--	--	--
MAY 27...	--	--	--	--	--	--	--	--	--	--
OCT 06...	--	<100	--	<900	--	<250	--	<100	--	--
MAY , 1971	--	<150	--	<200	--	<250	--	350	--	--
11...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 05...	--	--	--	--	--	--	--	--	--	--
JUN , 1972	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
JUL 12...	--	--	--	--	--	--	--	--	--	--
AUG 09...	--	--	--	--	--	--	--	--	--	--
SEP 13...	--	--	--	--	--	--	--	--	--	--
OCT 04...	--	--	--	--	--	--	--	--	--	--
16...	--	<100	--	<200	--	<250	--	<430	--	--
NOV 15...	--	--	--	--	--	--	--	--	--	--
DEC , 1972	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--
JAN , 1973	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
FEB 07...	--	--	--	--	--	--	--	--	--	--
OCT 04...	ND	--	<20	--	ND	--	ND	--	100	2
OCT , 1974	<2	--	ND	--	ND	--	<20	--	50	2
NOV , 1975	<2	--	ND	--	ND	--	ND	--	90	<2
OCT , 1976	<2	--	<20	--	ND	--	<20	--	130	3
28...	4	--	ND	--	ND	--	3	--	90	3
OCT , 1977	ND	--	ND	--	ND	--	2	--	100	3
27...	--	10	--	--	--	10	--	--	--	--
OCT , 1978	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
OCT , 1979	--	--	--	--	--	--	--	--	--	--
30...	2	--	1	--	0	--	0	--	100	1
OCT , 1980	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--

## 01475300 - DARBY CREEK AT WATERLOO MILLS NEAR DEVON, PA--Continued

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
FEB , 1970										
10...	<100	<250	--	<250	--	<50	--	--	249	9.7
MAY										
27...	--	--	--	--	--	--	--	--	23	.52
OCT										
06...	<50	<250	--	<250	--	<20	--	--	2	.01
MAY , 1971										
11...	<50	<250	--	<250	--	<20	--	--	5	.09
OCT										
05...	<50	<250	--	<250	--	<50	--	--	4	.07
JUN , 1972										
07...	--	--	--	--	--	--	--	--	--	--
JUL										
12...	--	--	--	--	--	--	--	--	--	--
AUG										
09...	--	--	--	--	--	--	--	--	--	--
SEP										
13...	--	--	--	--	--	--	--	--	--	--
OCT										
04...	--	--	--	--	--	--	--	--	--	--
16...	<50	<250	--	<250	--	<20	--	--	6	.07
NOV										
15...	--	--	--	--	--	--	--	--	--	--
DEC , 1972										
06...	--	--	--	--	--	--	--	--	--	--
JAN , 1973										
10...	--	--	--	--	--	--	--	--	--	--
FEB										
07...	--	--	--	--	--	--	--	--	--	--
OCT										
04...	--	--	30	--	2	--	<20	--	--	--
OCT , 1974										
22...	--	--	<10	--	3	--	<20	--	--	--
NOV , 1975										
07...	--	--	20	--	2	--	20	--	--	--
OCT , 1976										
28...	--	--	70	--	4	--	<20	--	--	--
OCT , 1977										
31...	--	--	30	--	ND	--	<20	.00	--	--
OCT , 1978										
27...	--	--	40	--	2	--	ND	.10	--	--
OCT , 1979										
30...	--	--	--	--	--	10	--	--	--	--
OCT , 1980										
31...	--	--	30	--	0	--	0	.00	--	--



TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01475830 - CRUM CREEK NEAR PAOLI, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sub>d</sub>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
FEB , 1970										
10...	--	84215 <sub>a</sub> /	9.2	100	7.5	3.0	--	720	--	210
MAY										
27...	--	84215	8.1	120	7.9	21.0	--	<1	--	36
OCT										
06...	--	84215	2.5	110	7.8	14.0	--	200	--	70
MAY , 1971										
11...	--	84215	6.8	170	7.3	14.0	--	5400	120	47
OCT										
05...	--	84215	6.2	170	7.4	17.0	--	9800	140	240
OCT , 1972										
16...	0830	84215	4.2	140	7.3	8.5	--	690	45	190
OCT , 1973										
05...	0745	1028 <sub>b</sub> /	--	180	6.5	17.5	11.0	14300	330	240
OCT , 1974										
22...	1500	1028	--	167	7.4	7.0	10.2	--	--	--
NOV , 1975										
10...	1030	1028	--	180	7.5	16.0	9.6	--	--	--
OCT , 1976										
28...	0945	1028	--	220	7.1	6.0	12.2	--	--	--
OCT , 1977										
31...	0930	80010 <sub>c</sub> /	--	210	7.3	9.0	11.8	--	--	--
OCT , 1978										
27...	1045	80010	--	200	7.2	12.0	10.6	--	--	--
OCT , 1979										
30...	1400	80010	--	183	6.8	10.5	12.4	--	--	--
OCT , 1980										
31...	1500	80010	--	190	7.1	9.0	11.9	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
FEB , 1970										
10...	--	--	8.0	--	3.2	--	8.8	--	1.4	--
MAY										
27...	--	--	10	--	6.1	--	7.8	--	1.7	--
OCT										
06...	--	--	--	--	6.3	--	7.4	--	1.6	--
MAY , 1971										
11...	--	--	12	--	7.5	--	9.5	--	1.6	--
OCT										
05...	--	--	13	--	7.1	--	10	--	1.9	--
OCT , 1972										
16...	--	--	14	--	6.6	--	8.0	--	1.6	--
OCT , 1973										
05...	60	18	--	12	--	7.4	--	8.0	--	2.1
OCT , 1974										
22...	60	20	--	12	--	7.2	--	7.5	--	1.3
NOV , 1975										
10...	63	22	--	13	--	7.3	--	8.5	--	2.1
OCT , 1976										
28...	73	20	--	14	--	9.3	--	8.7	--	2.0
OCT , 1977										
31...	81	21	--	16	--	10	--	9.8	--	2.2
OCT , 1978										
27...	78	22	--	16	--	9.2	--	8.4	--	2.2
OCT , 1979										
30...	--	--	--	--	--	--	--	--	--	--
OCT , 1980										
31...	73	--	--	15	--	8.7	--	6.8	--	1.8

<sub>a</sub>/ Chester County Health Department Laboratory, Pennsylvania.

<sub>b</sub>/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

<sub>c</sub>/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

<sub>d</sub>/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01475830 - CRUM CREEK NEAR PAOLI, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS RESIDUE AT 105 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
FEB , 1970										
10...	--	--	--	19	5.3	--	--	--	179	--
MAY										
27...	--	--	--	7.4	11	--	--	--	137	--
OCT										
06...	--	--	--	7.7	16	--	--	--	67	--
MAY , 1971										
11...	--	--	--	14	13	--	--	--	95	--
OCT										
05...	--	--	--	8.0	10	--	--	--	112	--
OCT , 1972										
16...	--	--	--	27	10	--	--	--	109	--
OCT , 1973										
05...	52	0	43	11	11	.30	13	--	--	91
OCT , 1974										
22...	49	0	40	13	11	.20	15	101	--	91
NOV , 1975										
10...	50	0	41	11	14	.10	11	106	--	92
OCT , 1976										
28...	64	0	53	16	14	.10	16	128	--	110
OCT , 1977										
31...	73	0	60	14	15	.10	15	128	--	120
OCT , 1978										
27...	68	0	56	13	15	.10	14	118	--	110
OCT , 1979										
30...	--	--	42	14	16	.10	13	--	--	--
OCT , 1980										
31...	--	--	--	16	14	.00	18	110	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
FEB , 1970									
10...	1.4	--	--	--	--	--	--	--	.042
MAY									
27...	2.7	--	--	--	--	--	--	--	.030
OCT									
06...	2.4	.010	--	--	--	--	--	<.010	<.010
MAY , 1971									
11...	2.4	.020	--	.100	.16	--	--	.040	.010
OCT									
05...	3.2	.010	--	.060	.92	--	--	.040	<.010
OCT , 1972									
16...	3.0	<.010	--	.010	.12	--	--	.020	.020
OCT , 1973									
05...	2.7	--	--	.070	.46	.53	--	.030	.020
OCT , 1974									
22...	2.0	--	--	.130	.86	.99	--	.030	.010
NOV , 1975									
10...	2.7	--	--	<.010	.69	.69	--	.020	<.010
OCT , 1976									
28...	2.1	.010	2.1	.050	.20	.25	2.4	.030	.010
OCT , 1977									
31...	1.8	.010	1.8	.010	.18	.19	2.0	.010	.010
OCT , 1978									
27...	2.2	.010	2.2	.040	.23	.27	2.5	.010	<.010
OCT , 1979									
30...	--	--	2.4	.070	.84	.91	3.3	.020	--
OCT , 1980									
31...	1.7	.000	1.7	.040	.15	.19	1.9	.020	.010

## 01475830 - CRUM CREEK NEAR PAOLI, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
FEB , 1970	--	<100	--	<200	--	<250	--	<150	--	--
10...	--	--	--	--	--	--	--	--	--	--
MAY 27...	--	--	--	--	--	--	--	--	--	--
OCT 06...	--	<100	--	<900	--	<250	--	<100	--	--
MAY , 1971	--	<150	--	<200	--	<250	--	230	--	--
11...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 05...	--	<100	--	<200	--	<250	--	270	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	--	--	--
16...	--	<100	--	<200	--	<250	--	--	--	--
OCT , 1973	ND	--	<20	--	ND	--	ND	--	150	2
05...	ND	--	ND	--	ND	--	ND	--	120	2
OCT , 1974	ND	--	<20	--	ND	--	ND	--	100	4
22...	<2	--	<20	--	<2	--	ND	--	140	3
NOV , 1975	<2	--	<20	--	<2	--	ND	--	120	4
10...	ND	--	ND	--	ND	--	2	--	70	3
OCT , 1976	ND	--	ND	--	ND	--	ND	--	--	--
28...	ND	--	ND	--	ND	--	ND	--	--	--
OCT , 1977	ND	--	ND	--	ND	--	ND	--	--	--
31...	ND	--	ND	--	ND	--	ND	--	--	--
OCT , 1978	ND	--	ND	--	ND	--	ND	--	--	--
27...	ND	--	ND	--	ND	--	ND	--	--	--
OCT , 1979	ND	--	ND	--	ND	--	ND	--	--	--
30...	ND	--	ND	--	ND	--	ND	--	--	--
OCT , 1980	ND	--	ND	--	ND	--	ND	--	--	--
31...	3	--	.00	--	0	--	0	--	80	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
FEB , 1970	<100	<250	--	<250	--	<50	--	--	--	--
10...	--	--	--	--	--	--	--	--	12	.26
MAY 27...	--	--	--	--	--	--	--	--	1	.00
OCT 06...	<50	<250	--	<250	--	<20	--	--	6	.11
MAY , 1971	<50	<250	--	<250	--	<20	--	--	3	.05
11...	<50	<250	--	<250	--	<20	--	--	3	.03
OCT 05...	<50	<250	--	<250	--	<20	--	--	--	--
OCT , 1972	<50	<250	--	<250	--	<20	--	--	--	--
16...	--	--	20	--	2	--	<20	--	--	--
OCT , 1973	--	--	50	--	2	--	<20	--	--	--
05...	--	--	20	--	2	--	<20	--	--	--
OCT , 1974	--	--	20	--	4	--	<20	--	--	--
22...	--	--	<10	--	ND	--	ND	.00	--	--
NOV , 1975	--	--	50	--	3	--	ND	.00	--	--
10...	--	--	--	--	--	0	--	--	--	--
OCT , 1976	--	--	--	--	--	0	--	--	--	--
28...	--	--	--	--	--	0	--	--	--	--
OCT , 1977	--	--	--	--	--	0	--	--	--	--
31...	--	--	10	--	0	--	0	.00	--	--
OCT , 1978	--	--	10	--	0	--	0	.00	--	--
27...	--	--	10	--	0	--	0	.00	--	--
OCT , 1979	--	--	10	--	0	--	0	.00	--	--
30...	--	--	10	--	0	--	0	.00	--	--
OCT , 1980	--	--	10	--	0	--	0	.00	--	--
31...	--	--	10	--	0	--	0	.00	--	--

## 01475840 - CRUM CREEK AT WHITEHORSE, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sub>d/</sub>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
FEB , 1970										
10...	--	84215 <sub>a/</sub>	--	85	7.6	3.0	--	490	--	50
MAY										
27...	--	84215	12	100	7.8	17.0	--	680	--	410
OCT										
06...	--	84215	5.4	100	7.7	15.0	--	100	--	150
MAY , 1971										
11...	--	84215	13	165	7.2	15.0	--	3700	190	110
OCT										
05...	--	84215	12	160	7.5	17.0	--	8000	60	240
OCT , 1972										
16...	0925	84215	8.0	155	7.4	8.5	--	770	60	270
OCT , 1973										
05...	0810	1028 <sub>b/</sub>	--	186	6.7	17.5	11.0	17300	250	260
OCT , 1974										
22...	1535	1028	--	120	7.3	7.5	10.2	--	--	--
OCT , 1975										
31...	1415	1028	--	180	7.6	8.5	12.4	--	--	--
OCT , 1976										
28...	1030	1028	--	190	7.2	5.0	12.2	--	--	--
OCT , 1977										
31...	1030	80010 <sub>c/</sub>	--	195	7.5	9.5	12.0	--	--	--
OCT , 1978										
27...	1000	80010	--	200	7.4	11.5	10.2	--	--	--
OCT , 1979										
30...	1430	80010	--	163	6.9	10.0	12.3	--	--	--
NOV , 1980										
10...	1215	80010	--	200	7.1	9.0	11.9	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
FEB , 1970										
10...	--	--	5.0	--	2.3	--	3.4	--	1.0	--
MAY										
27...	--	--	8.8	--	5.7	--	7.9	--	1.6	--
OCT										
06...	--	--	--	--	5.9	--	7.1	--	1.9	--
MAY , 1971										
11...	--	--	11	--	7.1	--	8.9	--	1.3	--
OCT										
05...	--	--	12	--	6.4	--	8.4	--	1.7	--
OCT , 1972										
16...	--	--	14	--	6.6	--	9.8	--	1.6	--
OCT , 1973										
05...	60	17	--	12	--	7.2	--	8.7	--	2.2
OCT , 1974										
22...	60	19	--	12	--	7.2	--	8.3	--	1.5
OCT , 1975										
31...	68	25	--	14	--	8.0	--	8.3	--	1.8
OCT , 1976										
28...	65	17	--	13	--	8.0	--	7.5	--	1.9
OCT , 1977										
31...	89	36	--	23	--	7.7	--	8.3	--	3.4
OCT , 1978										
27...	67	19	--	14	--	7.8	--	7.4	--	2.3
OCT , 1979										
30...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
10...	65	--	--	14	--	7.4	--	7.3	--	1.8

<sub>a/</sub> Chester County Health Department Laboratory, Pennsylvania.<sub>b/</sub> U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.<sub>c/</sub> U.S. Geological Survey Central Laboratory Atlanta, Georgia.<sub>d/</sub> Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

## 01475840 - CRUM CREEK AT WHITEHORSE, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
FEB , 1970										
10...	--	--	--	10	3.2	--	--	--	164	--
MAY										
27...	--	--	--	15	6.3	--	--	--	153	--
OCT										
06...	--	--	--	5.8	3.0	--	--	--	81	--
MAY , 1971										
11...	--	--	--	12	11	--	--	--	113	--
OCT										
05...	--	--	--	5.5	11	--	--	--	105	--
OCT , 1972										
16...	--	--	--	21	12	--	--	--	111	--
OCT , 1973										
05...	53	0	43	14	14	.30	14	--	--	99
OCT , 1974										
22...	50	0	41	15	12	.20	15	99	--	96
OCT , 1975										
31...	52	0	43	14	12	.10	15	110	--	99
OCT , 1976										
28...	58	0	48	16	12	.10	17	107	--	100
OCT , 1977										
31...	65	0	53	--	--	--	--	--	--	--
OCT , 1978										
27...	59	0	48	12	13	.10	16	114	--	100
OCT , 1979										
30...	--	--	37	13	12	.10	15	--	--	--
NOV , 1980										
10...	--	--	--	11	12	.10	18	108	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL, (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL, (MG/L AS P)
FEB , 1970									
10...	1.2	--	--	--	--	--	--	--	.020
MAY									
27...	1.9	--	--	--	--	--	--	--	.040
OCT									
06...	2.4	<.010	--	--	--	--	--	.045	.010
MAY , 1971									
11...	1.7	.010	--	.130	.20	--	--	.022	.010
OCT									
05...	2.5	<.010	--	.010	.37	--	--	.032	<.010
OCT , 1972									
16...	2.5	<.010	--	.010	.01	--	--	.020	.010
OCT , 1973									
05...	2.1	--	--	.140	.67	.81	--	.020	.020
OCT , 1974									
22...	2.0	--	--	.090	.91	1.0	--	.020	.010
OCT , 1975									
31...	2.3	--	--	<.010	.54	.54	--	.010	.010
OCT , 1976									
28...	1.7	.010	1.7	.030	.22	.25	2.0	.030	.010
OCT , 1977									
31...	1.6	<.010	1.6	<.010	.14	.14	1.7	.010	<.010
OCT , 1978									
27...	1.7	.010	1.7	.030	.31	.34	2.0	.010	<.010
OCT , 1979									
30...	--	--	2.0	.060	.79	.85	2.9	.010	--
NOV , 1980									
10...	1.2	.000	1.2	.040	.14	.18	1.4	.020	.010

## 01475840 - CRUM CREEK AT WHITEHORSE, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
FEB , 1970	--	<100	--	<200	--	<250	--	<150	--	--
MAY 10...	--	--	--	--	--	--	--	--	--	--
MAY 27...	--	--	--	--	--	--	--	--	--	--
OCT 06...	--	<100	--	<900	--	<250	--	<100	--	--
MAY , 1971	--	<150	--	<200	--	<250	--	500	--	--
OCT 11...	--	<100	--	<200	--	<250	--	<100	--	--
OCT 05...	--	<100	--	<200	--	<250	--	<100	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	320	--	--
OCT 16...	--	<100	--	<200	--	<250	--	320	--	--
OCT , 1973	--	<100	--	<200	--	<250	--	320	--	--
OCT 05...	ND	--	<20	--	ND	--	ND	--	100	2
OCT , 1974	ND	--	ND	--	ND	--	ND	--	90	<2
OCT 22...	ND	--	ND	--	ND	--	ND	--	90	<2
OCT , 1975	ND	--	ND	--	ND	--	ND	--	100	8
OCT 31...	ND	--	ND	--	ND	--	ND	--	100	8
OCT , 1976	<2	--	<20	--	ND	--	ND	--	130	5
OCT 28...	<2	--	<20	--	ND	--	ND	--	130	5
OCT , 1977	ND	--	ND	--	ND	--	5	--	90	6
OCT 31...	ND	--	ND	--	ND	--	5	--	90	6
OCT , 1978	ND	--	ND	--	<2	--	2	--	70	6
OCT 27...	ND	--	ND	--	<2	--	2	--	70	6
OCT , 1979	--	20	--	--	--	10	--	--	--	--
OCT 30...	--	20	--	--	--	10	--	--	--	--
NOV , 1980	2	--	1	--	1	--	2	--	160	1
NOV 10...	2	--	1	--	1	--	2	--	160	1

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
FEB , 1970	<100	<250	--	<250	--	<50	--	--	--	--
MAY 10...	<100	<250	--	<250	--	<50	--	--	--	--
MAY 27...	--	--	--	--	--	--	--	--	11	.36
OCT 06...	<50	<250	--	<250	--	<20	--	--	1	.01
MAY , 1971	<50	<250	--	<250	--	<20	--	--	4	.14
OCT 11...	<50	<250	--	<250	--	<20	--	--	3	.10
OCT 05...	<50	<250	--	<250	--	<20	--	--	3	.10
OCT , 1972	<50	<250	--	<250	--	<20	--	--	--	--
OCT 16...	<50	<250	--	<250	--	<20	--	--	--	--
OCT , 1973	--	--	20	--	2	--	20	--	--	--
OCT 05...	--	--	20	--	2	--	<20	--	--	--
OCT , 1974	--	--	20	--	3	--	<20	--	--	--
OCT 22...	--	--	20	--	4	--	ND	--	--	--
OCT , 1975	--	--	50	--	ND	--	<20	.00	--	--
OCT 31...	--	--	<10	--	2	--	<20	.00	--	--
OCT , 1976	--	--	--	--	--	10	--	--	--	--
OCT 28...	--	--	--	--	--	10	--	--	--	--
OCT , 1977	--	--	20	--	0	--	1	.00	--	--
OCT 31...	--	--	20	--	0	--	1	.00	--	--
OCT , 1978	--	--	20	--	0	--	1	.00	--	--
OCT 27...	--	--	20	--	0	--	1	.00	--	--
OCT , 1979	--	--	20	--	0	--	1	.00	--	--
OCT 30...	--	--	20	--	0	--	1	.00	--	--
NOV , 1980	--	--	20	--	0	--	1	.00	--	--
NOV 10...	--	--	20	--	0	--	1	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01476430 - RIDLEY CREEK AT GOSHENVILLE, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <u>d</u>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
FEB , 1970										
10...	--	84215 <u>a</u> /	--	60	7.1	3.0	--	940	--	560
MAY										
28...	--	84215	5.5	80	8.1	15.0	--	86	--	100
OCT										
06...	--	84215	2.1	95	7.5	13.0	--	6000	--	270
JUN , 1971										
08...	--	84215	--	140	7.8	18.0	--	5000	290	680
OCT										
05...	--	84215	5.2	115	7.2	17.0	--	9800	61	170
OCT , 1972										
16...	1215	84215	3.5	140	7.4	9.5	--	--	--	--
OCT , 1973										
05...	0855	1028 <u>b</u> /	--	170	7.0	17.0	10.8	8300	210	210
OCT , 1974										
23...	0815	1028	--	95	7.0	4.0	13.5	--	--	--
OCT , 1975										
31...	0900	1028	--	170	7.0	6.5	11.8	--	--	--
OCT , 1976										
20...	1000	1028	--	220	7.3	10.0	11.0	--	--	--
OCT , 1977										
19...	1530	80010 <u>c</u> /	--	160	7.1	12.5	10.0	--	--	--
OCT , 1978										
24...	1300	80010	--	125	7.1	11.0	10.6	--	--	--
OCT , 1979										
31...	1030	80010	--	149	6.6	8.0	12.4	--	--	--
NOV , 1980										
17...	1330	80010	--	190	7.0	4.0	13.4	--	--	--

DATE	HARD- NESS (MG/L AS CaCO3)	HARD- NESS NONCAR- BONATE (MG/L CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
FEB , 1970										
10...	--	--	4.5	--	3.0	--	3.2	--	1.4	--
MAY										
28...	--	--	7.2	--	4.8	--	6.3	--	1.3	--
OCT										
06...	--	--	10	--	5.6	--	12	--	1.8	--
JUN , 1971										
08...	--	--	8.0	--	5.4	--	7.3	--	1.7	--
OCT										
05...	--	--	8.9	--	4.8	--	5.8	--	1.4	--
OCT , 1972										
16...	--	--	12	--	5.2	--	11	--	1.5	--
OCT , 1973										
05...	50	19	--	10	--	6.1	--	9.0	--	2.1
OCT , 1974										
23...	53	23	--	11	--	6.1	--	8.1	--	1.2
OCT , 1975										
31...	54	24	--	11	--	6.4	--	7.6	--	1.6
OCT , 1976										
20...	54	20	--	11	--	6.4	--	9.6	--	2.0
OCT , 1977										
19...	54	29	--	11	--	6.5	--	7.8	--	2.1
OCT , 1978										
24...	54	19	--	11	--	6.4	--	8.8	--	1.8
OCT , 1979										
31...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
17...	60	--	--	13	--	6.7	--	8.6	--	2.1

a/ Chester County Health Department Laboratory, Pennsylvania.

b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

01476430 - RIDLEY CREEK AT GOSHENVILLE, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
FEB , 1970										
10...	--	--	--	4.9	5.3	--	--	--	172	--
MAY										
28...	--	--	--	3.3	8.4	--	--	--	93	--
OCT										
06...	--	--	--	16	23	--	--	--	100	--
JUN , 1971										
08...	--	--	--	11	10	--	--	--	92	--
OCT										
05...	--	--	--	5.5	9.1	--	--	--	89	--
OCT , 1972										
16...	--	--	--	22	16	--	--	--	103	--
OCT , 1973										
05...	38	0	31	12	14	.40	12	--	--	84
OCT , 1974										
23...	36	0	30	15	11	.20	12	92	--	82
OCT , 1975										
31...	36	0	30	14	12	<.10	11	89	--	81
OCT , 1976										
20...	41	0	34	13	15	.10	12	108	--	90
OCT , 1977										
19...	31	0	25	15	13	<.10	12	103	--	83
OCT , 1978										
24...	43	0	35	14	15	.10	12	93	--	90
OCT , 1979										
31...	--	--	23	14	15	.10	9.9	--	--	--
NOV , 1980										
17...	--	--	--	15	14	.10	12	115	--	--

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
FEB , 1970									
10...	1.2	--	--	--	--	--	--	--	.030
MAY									
28...	2.3	--	--	--	--	--	--	--	.030
OCT									
06...	2.4	.010	--	--	--	--	--	.100	.091
JUN , 1971									
08...	3.1	.012	--	.000	.03	--	--	.150	.030
OCT									
05...	2.3	<.010	--	.010	.35	--	--	.094	.030
OCT , 1972									
16...	3.0	<.010	--	.020	.18	--	--	.240	.220
OCT , 1973									
05...	2.3	.001	2.3	.030	.73	.76	3.1	.150	.150
OCT , 1974									
23...	2.4	--	--	.040	.73	.77	--	.170	.150
OCT , 1975									
31...	2.5	--	--	<.010	.58	.58	--	.090	.070
OCT , 1976									
20...	2.0	.010	2.0	.080	.25	.33	2.3	.090	.090
OCT , 1977									
19...	2.3	.010	2.3	.010	.53	.54	2.8	.090	.060
OCT , 1978									
24...	2.0	.010	2.0	.080	.35	.43	2.4	.080	.060
OCT , 1979									
31...	--	--	2.5	.060	1.5	1.6	4.1	.050	--
NOV , 1980									
17...	2.0	.010	2.0	.020	.27	.29	2.3	.050	.030



## 01476430 - RIDLEY CREEK AT GOSHENVILLE, PA--Continued

DATE	CADMIUM TOTAL DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
FEB , 1970	--	<100	--	<200	--	<250	--	<150	--	--
10...	--	--	--	--	--	--	--	--	--	--
MAY 28...	--	--	--	--	--	--	--	--	--	--
OCT 06...	--	<100	--	<900	--	<250	--	<100	--	--
JUN , 1971	--	<150	--	<200	--	<250	--	380	--	--
08...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 05...	--	<100	--	<200	--	<250	--	160	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	280	--	ND
16...	ND	--	ND	--	ND	--	ND	90	--	2
OCT , 1973	ND	--	ND	--	ND	--	<20	--	120	3
OCT 05...	ND	--	ND	--	ND	--	<20	--	100	24
OCT , 1974	<2	--	ND	--	ND	--	2	--	120	7
23...	ND	--	<20	--	<2	--	ND	--	160	5
OCT , 1975	ND	--	<2	--	ND	--	4	--	--	--
31...	ND	--	ND	--	ND	--	--	--	--	--
OCT , 1976	ND	--	ND	--	ND	--	--	--	--	--
20...	ND	--	ND	--	ND	--	--	--	--	--
OCT , 1977	ND	--	ND	--	ND	--	--	--	--	--
19...	ND	--	ND	--	ND	--	--	--	--	--
OCT , 1978	ND	--	ND	--	ND	--	--	--	--	--
24...	ND	--	ND	--	ND	--	--	--	--	--
OCT , 1979	ND	--	ND	--	ND	--	--	--	--	--
31...	ND	--	ND	--	ND	--	--	--	--	--
NOV , 1980	0	--	.00	--	1	--	1	--	90	0
17...	0	--	.00	--	1	--	1	--	90	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
FEB , 1970	<100	<250	--	<250	--	<50	--	--	--	--
10...	--	--	--	--	--	--	--	--	6	.09
MAY 28...	--	--	--	--	--	--	--	--	1	.00
OCT 06...	<100	<250	--	<250	--	<20	--	--	3	.04
JUN , 1971	<50	<250	--	<250	--	<20	--	--	--	--
08...	<50	<250	--	<250	--	<20	--	--	--	--
OCT 05...	<50	<250	--	<250	--	<20	--	--	--	--
OCT , 1972	<50	<250	--	<250	--	<20	--	--	--	--
16...	--	40	--	--	<2	--	<20	--	--	--
OCT , 1973	--	--	30	--	2	--	ND	--	--	--
OCT 05...	--	--	70	--	4	--	<20	--	--	--
OCT , 1974	--	--	120	--	4	--	<20	--	--	--
23...	--	--	50	--	3	--	ND	.00	--	--
OCT , 1975	--	--	40	--	3	--	ND	.00	--	--
31...	--	--	--	--	--	10	--	--	--	--
OCT , 1976	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
OCT , 1977	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
OCT , 1978	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
OCT , 1979	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
NOV , 1980	--	--	30	--	1	--	0	.00	--	--
17...	--	--	30	--	1	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01476435 - RIDLEY CREEK AT DUTTON MILL NEAR WEST CHESTER, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTANTANEOUS (CFS)	SPE- CIFIC CON- DUCTANCE (US/CM) <sub>d</sub>	PH (STANDARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
FEB , 1970										
10...	--	84215 <sub>a</sub> /	--	95	6.8	3.0	--	580	--	120
MAY										
28...	--	84215	12	80	8.3	15.0	--	14	--	52
OCT										
06...	--	84215	4.6	95	7.3	13.0	--	3200	--	280
JUN , 1971										
08...	--	84215	--	140	7.9	19.0	--	3400	670	660
OCT										
05...	--	84215	--	125	7.4	18.0	--	2800	210	160
OCT , 1972										
16...	--	84215	--	135	7.4	9.0	--	1800	420	310
OCT , 1973										
05...	0950	1028 <sub>b</sub> /	--	175	6.8	17.5	11.4	0300	1100	230
OCT , 1974										
22...	1600	1028	--	115	7.5	10.5	9.7	--	--	--
OCT , 1975										
31...	1045	1028	--	160	7.3	7.0	12.1	--	--	--
OCT , 1976										
20...	0915	1028	--	190	7.1	10.0	11.0	--	--	--
OCT , 1977										
27...	1100	80010 <sub>c</sub> /	--	170	6.9	17.0	10.0	--	--	--
OCT , 1978										
24...	1345	80010	--	135	7.0	11.5	11.4	--	--	--
OCT , 1979										
30...	1530	80010	--	147	6.9	10.5	12.2	--	--	--
NOV , 1980										
17...	1430	80010	--	170	7.2	4.5	14.0	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
FEB , 1970										
10...	--	--	8.8	--	3.9	--	5.9	--	1.4	--
MAY										
28...	--	--	8.0	--	5.0	--	6.3	--	1.3	--
OCT										
06...	--	--	10	--	5.7	--	8.4	--	1.8	--
JUN , 1971										
08...	--	--	8.5	--	5.8	--	7.1	--	2.7	--
OCT										
05...	--	--	10	--	3.0	--	6.6	--	1.5	--
OCT , 1972										
16...	--	--	11	--	4.9	--	8.2	--	1.7	--
OCT , 1973										
05...	52	18	--	10	--	6.6	--	8.2	--	1.8
OCT , 1974										
22...	51	20	--	10	--	6.4	--	7.1	--	1.8
OCT , 1975										
31...	56	26	--	12	--	6.3	--	6.8	--	1.6
OCT , 1976										
20...	55	19	--	11	--	6.8	--	8.9	--	2.4
OCT , 1977										
27...	56	23	--	11	--	6.9	--	8.0	--	2.6
OCT , 1978										
24...	55	19	--	11	--	6.6	--	8.0	--	1.8
OCT , 1979										
30...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
17...	57	--	--	12	--	6.6	--	7.4	--	1.8

a/ Chester County Health Department Laboratory, Pennsylvania.

b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

## 01476435 - RIDLEY CREEK AT DUTTON MILL NEAR WEST CHESTER, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
FEB , 1970										
10...	--	--	--	12	7.4	--	--	--	99	--
MAY										
28...	--	--	--	32	6.3	--	--	--	166	--
OCT										
06...	--	--	--	20	14	--	--	--	80	--
JUN , 1971										
08...	--	--	--	7.4	9.0	--	--	--	95	--
OCT										
05...	--	--	--	9.9	10	--	--	--	90	--
OCT , 1972										
16...	--	--	--	3.8	13	--	--	--	88	--
OCT , 1973										
05...	42	0	34	12	12	.30	14	--	--	86
OCT , 1974										
22...	38	0	31	13	12	.20	15	89	--	84
OCT , 1975										
31...	37	0	30	13	11	.10	13	100	--	82
OCT , 1976										
20...	45	0	37	11	15	.10	15	108	--	93
OCT , 1977										
27...	40	0	33	14	13	.10	15	97	--	91
OCT , 1978										
24...	44	0	36	13	14	.10	14	96	--	90
OCT , 1979										
30...	--	--	24	14	15	.10	13	--	--	--
NOV , 1980										
17...	--	--	--	13	13	.10	15	113	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
FEB , 1970									
10...	2.9	--	--	--	--	--	--	--	.085
MAY									
28...	2.4	--	--	--	--	--	--	--	.010
OCT									
06...	2.1	.012	--	--	--	--	--	.023	.020
JUN , 1971									
08...	3.0	.040	--	.150	.02	--	--	.114	.030
OCT									
05...	2.3	.010	--	.010	.61	--	--	.060	.010
OCT , 1972									
16...	2.9	.010	--	.010	.35	--	--	.100	.080
OCT , 1973									
05...	1.9	--	--	.120	.36	.48	--	.060	.050
OCT , 1974									
22...	2.1	--	--	.070	1.2	1.3	--	.090	.070
OCT , 1975									
31...	2.7	--	--	.090	.68	.77	--	.060	.030
OCT , 1976									
20...	2.0	.010	2.0	.110	.37	.48	2.5	.080	.050
OCT , 1977									
27...	1.9	.020	1.9	.030	.34	.37	2.3	.060	.040
OCT , 1978									
24...	2.2	.010	2.2	.090	.26	.35	2.6	.030	.020
OCT , 1979									
30...	--	--	2.5	.200	.19	.39	2.9	.040	--
NOV , 1980									
17...	2.4	.000	2.4	.020	.51	.53	2.9	.030	.020

## 01476435 - RIDLEY CREEK AT DUTTON MILL NEAR WEST CHESTER, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
FEB , 1970										
10...	--	<100	--	<200	--	<250	--	<150	--	--
MAY										
28...	--	--	--	--	--	--	--	--	--	--
OCT										
06...	--	<100	--	<900	--	<250	--	<100	--	--
JUN , 1971										
08...	--	<150	--	<200	--	<250	--	600	--	--
OCT										
05...	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1972										
16...	--	<100	--	<200	--	<250	--	290	--	--
OCT , 1973										
05...	ND	--	ND	--	ND	--	ND	340	--	<2
OCT , 1974										
22...	ND	--	ND	--	ND	--	<20	--	160	2
OCT , 1975										
31...	ND	--	ND	--	ND	--	<20	--	60	4
OCT , 1976										
20...	<2	--	<20	--	2	--	<20	--	150	46
OCT , 1977										
27...	5	--	ND	--	ND	--	<2	--	210	130
OCT , 1978										
24...	ND	--	ND	--	<2	--	4	--	140	4
OCT , 1979										
30...	--	10	--	--	--	0	--	--	--	--
NOV , 1980										
17...	0	--	.00	--	0	--	1	--	110	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (1/DAY)
FEB , 1970										
10...	<100	<250	--	<250	--	<50	--	--	460	--
MAY										
28...	--	--	--	--	--	--	--	--	16	.52
OCT										
06...	<50	<250	--	<250	--	<20	--	--	8	.10
JUN , 1971										
08...	<50	<250	--	<250	--	<20	--	--	--	--
OCT										
05...	<50	<250	--	<250	--	<50	--	--	4	--
OCT , 1972										
16...	<50	<250	--	<250	--	<20	--	--	--	--
OCT , 1973										
05...	--	50	--	--	ND	--	<20	--	--	--
OCT , 1974										
22...	--	--	40	--	3	--	ND	--	--	--
OCT , 1975										
31...	--	--	50	--	3	--	30	--	--	--
OCT , 1976										
20...	--	--	60	--	9	--	20	--	--	--
OCT , 1977										
27...	--	--	40	--	3	--	<20	.00	--	--
OCT , 1978										
24...	--	--	80	--	3	--	ND	.00	--	--
OCT , 1979										
30...	--	--	--	--	--	0	--	--	--	--
NOV , 1980										
17...	--	--	50	--	6	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01476790 - EAST BRANCH CHESTER CREEK AT GREEN HILL, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sup>a</sup>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
MAR , 1970										
07...	--	84215 <sup>a</sup> /	3.3	125	7.9	6.0	--	--	--	--
MAY										
22...	--	84215	3.2	145	7.4	20.0	--	<1	--	6
OCT										
26...	--	84215	.80	98	7.5	11.0	--	2300	--	420
MAY , 1971										
17...	--	84215	2.6	175	7.2	12.0	--	14800	440	170
OCT										
11...	--	84215	2.3	170	6.7	12.0	--	37000	350	1000
OCT , 1972										
10...	0730	84215	1.5	161	6.5	9.0	--	500	50	200
OCT , 1973										
05...	1035	1028 <sup>b</sup> /	--	190	6.5	15.5	11.2	8300	64	140
OCT , 1974										
29...	1415	1028	--	214	6.6	12.5	7.8	--	--	--
NOV , 1975										
03...	1500	1028	--	200	6.6	14.5	9.9	--	--	--
OCT , 1976										
21...	1545	1028	--	250	6.9	15.0	10.2	--	--	--
OCT , 1977										
18...	1130	80010 <sup>c</sup> /	--	200	6.3	12.5	11.5	--	--	--
OCT , 1978										
24...	1020	80010	--	160	5.6	9.5	10.8	--	--	--
OCT , 1979										
31...	1115	80010	--	199	6.3	10.5	11.8	--	--	--
NOV , 1980										
03...	0845	80010	--	205	6.5	6.0	11.8	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL, RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL, RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL, RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAR , 1970										
07...	--	--	--	--	--	--	--	--	--	--
MAY										
22...	--	--	11	--	7.0	--	7.8	--	1.6	--
OCT										
26...	--	--	10	--	5.6	--	7.5	--	1.8	--
MAY , 1971										
17...	--	--	11	--	6.4	--	11	--	2.0	--
OCT										
11...	--	--	11	--	3.5	--	7.0	--	1.8	--
OCT , 1972										
10...	--	--	12	--	4.8	--	7.6	--	1.3	--
OCT , 1973										
05...	60	39	--	14	--	6.0	--	9.2	--	1.7
OCT , 1974										
29...	75	67	--	20	--	6.2	--	8.6	--	1.6
NOV , 1975										
03...	65	40	--	14	--	7.3	--	10	--	1.5
OCT , 1976										
21...	65	33	--	15	--	6.8	--	12	--	2.3
OCT , 1977										
18...	61	34	--	13	--	6.9	--	11	--	1.7
OCT , 1978										
24...	60	55	--	12	--	7.3	--	11	--	2.2
OCT , 1979										
31...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
03...	47	--	--	9.1	--	6.0	--	11	--	1.2

<sup>a</sup>/ Chester County Health Department Laboratory, Pennsylvania.

<sup>b</sup>/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

<sup>c</sup>/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

<sup>d</sup>/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01476790 - EAST BRANCH CHESTER CREEK AT GREEN HILL, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C DIS- SOLVED (MG/L)
MAR , 1970									
07...	--	--	--	--	--	--	--	--	102
MAY 22...	--	--	--	24	15	--	--	--	128
OCT 26...	--	--	--	22	19	--	--	--	56
MAY 17, 1971	--	--	--	11	3.7	--	--	--	135
OCT 11...	--	--	--	15	20	--	--	--	132
OCT 10, 1972	--	--	--	11	19	--	--	--	109
OCT 05, 1973	26	0	21	13	20	.40	9.6	--	--
OCT 29, 1974	11	0	9	16	23	.10	8.9	124	--
NOV 03, 1975	30	0	25	13	24	<.10	7.7	119	--
OCT 21, 1976	40	0	33	18	26	.10	8.6	140	--
OCT 18, 1977	33	0	27	12	22	<.10	8.0	127	--
OCT 24, 1978	6	0	5	23	27	<.10	7.3	214	--
OCT 31, 1979	--	--	19	14	27	.10	7.9	--	--
NOV 03, 1980	--	--	--	12	23	.00	7.9	94	--

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
MAR , 1970										
07...	--	--	--	--	--	--	--	--	--	--
MAY 22...	--	4.1	--	--	--	--	--	--	--	.023
OCT 26...	--	3.3	<.010	--	--	--	--	--	.013	<.010
MAY 17, 1971	--	4.7	.020	--	.050	.09	--	--	.045	.010
OCT 11...	--	3.2	.010	--	.010	.57	--	--	.052	<.010
OCT 10, 1972	--	4.2	.010	--	.010	.12	--	--	.020	.010
OCT 05, 1973	95	4.5	--	--	.080	.31	.39	--	.030	.020
OCT 29, 1974	90	4.7	--	--	.020	.38	.40	--	.030	.020
NOV 03, 1975	92	4.5	--	--	<.010	.54	.54	--	.020	.010
OCT 21, 1976	110	3.5	.010	3.5	.050	.25	.30	3.8	.050	.030
OCT 18, 1977	91	5.0	<.010	5.0	.060	.12	.18	5.2	.010	<.010
OCT 24, 1978	97	5.5	<.010	5.5	<.010	11	11	17	.010	<.010
OCT 31, 1979	--	--	--	4.2	.000	.19	.19	4.4	.010	--
NOV 03, 1980	--	5.6	.000	5.6	.040	.30	.34	5.9	.080	.030

## 01476790 - EAST BRANCH CHESTER CREEK AT GREEN HILL, PA--Continued

DATE	CADMIUM TOTAL DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
MAR , 1970	--	--	--	--	--	--	--	--	--	--
MAY 07...	--	--	--	--	--	--	--	--	--	--
MAY 22...	--	<200	--	<500	--	<250	--	<250	--	--
OCT 26...	--	<100	--	<900	--	<250	--	<100	--	--
MAY , 1971	--	--	--	--	--	--	--	--	--	--
MAY 17...	--	<150	--	<200	--	<250	--	150	--	--
OCT 11...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 10...	--	<100	--	<200	--	<250	--	<500	--	--
OCT 05...	ND	--	ND	--	6	--	<20	90	--	<2
OCT 29...	<2	--	ND	--	ND	--	<20	--	30	2
NOV 03...	ND	--	ND	--	3	--	<20	--	30	ND
OCT 21...	ND	--	<20	--	<2	--	ND	--	50	<2
OCT 18...	ND	--	<2	--	ND	--	3	--	30	8
OCT 24...	<2	--	ND	--	<2	--	7	--	70	12
OCT 31...	--	10	--	--	--	10	--	--	--	--
NOV 03...	2	--	1	--	0	--	0	--	30	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
MAR , 1970	--	--	--	--	--	--	--	--	--	--
MAY 07...	--	--	--	--	--	--	--	--	--	--
MAY 22...	<100	<250	--	<250	--	<250	--	--	--	--
OCT 26...	<50	<250	--	<250	--	<20	--	--	--	--
MAY , 1971	--	--	--	--	--	--	--	--	--	--
MAY 17...	<50	<250	--	<250	--	<20	--	--	10	.07
OCT 11...	<50	<250	--	<250	--	<50	--	--	13	.08
OCT 10...	<50	<250	--	<250	--	<20	--	--	4	.02
OCT 05...	--	30	--	--	ND	--	<20	--	--	--
OCT 29...	--	--	30	--	5	--	<20	--	--	--
NOV 03...	--	--	40	--	2	--	20	--	--	--
OCT 21...	--	--	50	--	3	--	20	--	--	--
OCT 18...	--	--	60	--	2	--	<20	.00	--	--
OCT 24...	--	--	4200	--	21	--	250	.10	--	--
OCT 31...	--	--	--	--	--	10	--	--	--	--
NOV 03...	--	--	20	--	0	--	3	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01476830 - EAST BRANCH CHESTER CREEK AT MILLTOWN, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sub>d</sub>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
FEB , 1970										
28...	--	84215 <sub>a</sub>	10	110	7.3	2.0	--	--	--	--
MAY										
16...	--	84215	13	160	--	16.0	--	<1	--	<1
OCT										
26...	--	84215	2.5	115	8.0	14.0	--	4300	--	600
MAY , 1971										
17...	--	84215	7.6	185	7.1	16.0	--	3200	3100	350
OCT										
11...	--	84215	7.0	165	7.2	15.0	--	122000	2200	3500
OCT , 1972										
10...	0820	84215	4.6	171	6.9	9.0	--	3700	2000	2100
OCT , 1973										
05...	1120	1028 <sub>b</sub>	--	240	7.2	19.5	12.4	1600	1200	360
OCT , 1974										
29...	1530	1028	--	140	7.1	14.0	8.8	--	--	--
OCT , 1975										
31...	0945	1028	--	230	7.6	8.0	13.4	--	--	--
OCT , 1976										
21...	1445	1028	--	230	7.4	13.5	10.8	--	--	--
OCT , 1977										
18...	1245	80010 <sub>c</sub>	--	240	6.6	13.5	11.0	--	--	--
OCT , 1978										
24...	1130	80010	--	175	6.9	11.5	11.0	--	--	--
OCT , 1979										
31...	0830	80010	--	250	6.5	8.0	11.8	--	--	--
NOV , 1980										
03...	1030	80010	--	249	6.4	9.0	12.4	--	--	--

DATE	HARD- NESS (MG/L AS CaCO3)	HARD- NESS NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
FEB , 1970										
28...	--	--	--	--	--	--	--	--	--	--
MAY										
16...	--	--	20	--	10	--	11	--	2.2	--
OCT										
26...	--	--	15	--	7.1	--	7.1	--	4.0	--
MAY , 1971										
17...	--	--	15	--	7.2	--	9.5	--	2.9	--
OCT										
11...	--	--	8.1	--	2.4	--	3.7	--	1.3	--
OCT , 1972										
10...	--	--	13	--	7.0	--	7.5	--	2.9	--
OCT , 1973										
05...	73	23	--	15	--	8.6	--	8.5	--	3.2
OCT , 1974										
29...	76	31	--	18	--	7.5	--	8.1	--	4.0
OCT , 1975										
31...	83	35	--	19	--	8.7	--	9.1	--	3.6
OCT , 1976										
21...	76	31	--	17	--	8.2	--	5.3	--	5.2
OCT , 1977										
18...	83	30	--	19	--	8.7	--	9.8	--	3.6
OCT , 1978										
24...	85	35	--	19	--	9.2	--	9.3	--	4.2
OCT , 1979										
31...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
03...	91	--	--	20	--	10	--	9.6	--	2.8

<sub>a</sub>/ Chester County Health Department Laboratory, Pennsylvania.

<sub>b</sub>/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

<sub>c</sub>/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

<sub>d</sub>/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).



## 01476830 - EAST BRANCH CHESTER CREEK AT MILLTOWN, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
FEB , 1970										
28...	--	--	--	--	--	--	--	--	121	--
MAY										
16...	--	--	--	33	13	--	--	--	136	--
OCT										
26...	--	--	--	27	12	--	--	--	85	--
MAY , 1971										
17...	--	--	--	22	11	--	--	--	154	--
OCT										
11...	--	--	--	19	11	--	--	--	140	--
OCT , 1972										
10...	--	--	--	9.3	17	--	--	--	112	--
OCT , 1973										
05...	61	0	50	16	15	.30	15	--	--	110
OCT , 1974										
29...	55	0	45	20	19	.10	9.9	127	--	110
OCT , 1975										
31...	58	0	48	19	18	<.10	13	138	--	120
OCT , 1976										
21...	55	0	45	22	11	.10	13	125	--	110
OCT , 1977										
18...	64	0	53	23	20	.10	12	150	--	130
OCT , 1978										
24...	61	0	50	22	20	.10	15	142	--	130
OCT , 1979										
31...	--	--	41	23	19	.10	15	--	--	--
NOV , 1980										
03...	--	--	--	22	24	.00	17	150	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
FEB , 1970									
28...	--	--	--	--	--	--	--	--	--
MAY									
16...	4.1	--	--	--	--	--	--	--	.013
OCT									
26...	1.7	.024	--	.130	.18	--	--	.100	.040
MAY , 1971									
17...	3.3	.020	--	.070	.19	--	--	.072	.013
OCT									
11...	1.4	.020	--	.010	.83	--	--	.120	.040
OCT , 1972									
10...	2.3	.030	--	.030	.53	--	--	.060	.030
OCT , 1973									
05...	2.1	.001	2.1	.120	.64	.76	2.9	.040	.010
OCT , 1974									
29...	2.2	--	--	.070	1.0	1.1	--	.200	.050
OCT , 1975									
31...	2.7	--	--	.030	.71	.74	--	.050	.020
OCT , 1976									
21...	1.4	.020	1.4	.080	.45	.53	1.9	.370	.060
OCT , 1977									
18...	1.7	.020	1.7	.430	.21	.64	2.3	.050	.010
OCT , 1978									
24...	2.0	.050	2.0	.060	.46	.52	2.5	.100	<.010
OCT , 1979									
31...	--	--	2.6	.160	1.2	1.4	4.0	.030	--
NOV , 1980									
03...	2.4	.030	2.4	.060	.19	.25	2.7	.040	.010

## 01476830 - EAST BRANCH CHESTER CREEK AT MILLTOWN, PA--Continued

DATE	CADMIUM TOTAL DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
FEB , 1970										
28...	--	--	--	--	--	--	--	--	--	--
MAY										
16...	--	--	--	--	--	--	--	--	--	--
OCT										
26...	--	<100	--	<900	--	<250	--	<100	--	--
MAY , 1971										
17...	--	<150	--	<200	--	<250	--	400	--	--
OCT										
11...	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1972										
10...	--	<100	--	<200	--	<250	--	1200	--	--
OCT , 1973										
05...	ND	--	ND	--	5	--	<20	360	--	<2
OCT , 1974										
29...	<2	--	ND	--	ND	--	ND	--	80	<2
OCT , 1975										
31...	<2	--	ND	--	ND	--	<20	--	100	2
OCT , 1976										
21...	<2	--	<20	--	<2	--	ND	--	230	2
OCT , 1977										
18...	ND	--	<2	--	ND	--	4	--	<10	8
OCT , 1978										
24...	ND	--	ND	--	2	--	<2	--	230	5
OCT , 1979										
31...	--	10	--	--	--	10	--	--	--	--
NOV , 1980										
03...	3	--	2	--	0	--	0	--	90	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
FEB , 1970										
28...	--	--	--	--	--	--	--	--	--	--
MAY										
16...	--	<250	--	--	--	--	--	--	--	--
OCT										
26...	<50	--	--	<250	--	<20	--	--	--	--
MAY , 1971										
17...	<50	<250	--	<250	--	<20	--	--	27	.55
OCT										
11...	<50	<250	--	<250	--	<50	--	--	25	.47
OCT , 1972										
10...	<50	<250	--	<250	--	<20	--	--	20	.25
OCT , 1973										
05...	--	110	--	--	ND	--	<20	--	--	--
OCT , 1974										
29...	--	--	100	--	<2	--	<20	--	--	--
OCT , 1975										
31...	--	--	120	--	2	--	<20	--	--	--
OCT , 1976										
21...	--	--	120	--	2	--	<20	--	--	--
OCT , 1977										
18...	--	--	90	--	3	--	ND	.00	--	--
OCT , 1978										
24...	--	--	140	--	3	--	ND	.00	--	--
OCT , 1979										
31...	--	--	--	--	--	10	--	--	--	--
NOV , 1980										
03...	--	--	80	--	0	--	2	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01476835 - EAST BRANCH CHESTER CREEK AT WESTTOWN SCHOOL, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <u>d</u>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
FEB , 1970										
21...	--	84215 <u>a</u> /	6.9	130	8.0	10.0	--	120	--	<1
MAY										
09...	--	84215	10	165	7.9	15.0	--	<1	--	<1
OCT										
26...	--	84215	4.4	140	8.0	14.0	--	>300000.0	--	620
MAY , 1971										
17...	--	84215	13	180	7.1	17.0	--	20400	3000	750
OCT										
11...	--	84215	12	150	7.0	15.0	--	348000.0	7200	12000
OCT , 1972										
10...	0945	84215	7.8	178	6.5	9.5	--	28000	400	660
OCT , 1973										
05...	1155	1028 <u>b</u> /	--	260	6.9	20.0	11.4	72000	6600	420
OCT , 1974										
29...	1600	1028	--	132	6.8	13.5	9.2	--	--	--
OCT , 1975										
31...	1245	1028	--	250	7.1	10.0	10.1	--	--	--
OCT , 1976										
28...	1130	1028	--	245	7.0	8.0	11.8	--	--	--
OCT , 1977										
18...	1400	80010 <u>c</u> /	--	220	6.9	12.5	10.6	--	--	--
OCT , 1978										
24...	1515	80010	--	190	7.2	14.0	11.2	--	--	--
OCT , 1979										
31...	1315	80010	--	228	6.8	7.0	10.9	--	--	--
NOV , 1980										
03...	1230	80010	--	270	6.9	9.5	11.7	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
FEB , 1970										
21...	--	--	--	--	--	--	--	--	--	--
MAY										
09...	--	--	7.3	--	4.7	--	7.4	--	2.0	--
OCT										
26...	--	--	16	--	6.9	--	9.4	--	4.6	--
MAY , 1971										
17...	--	--	14	--	6.8	--	8.1	--	3.2	--
OCT										
11...	--	--	14	--	4.5	--	7.0	--	2.3	--
OCT , 1972										
10...	--	--	16	--	6.9	--	9.0	--	2.7	--
OCT , 1973										
05...	75	27	--	17	--	7.8	--	11	--	3.9
OCT , 1974										
29...	80	32	--	19	--	8.0	--	10	--	3.4
OCT , 1975										
31...	91	38	--	23	--	8.2	--	10	--	3.5
OCT , 1976										
28...	82	35	--	18	--	9.0	--	10	--	3.8
OCT , 1977										
18...	77	34	--	18	--	7.7	--	10	--	4.4
OCT , 1978										
24...	87	35	--	20	--	9.0	--	12	--	4.5
OCT , 1979										
31...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
03...	93	--	--	21	--	9.9	--	12	--	3.5

a/ Chester County Health Department Laboratory, Pennsylvania.

b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius;  
 Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01476835 - EAST BRANCH CHESTER CREEK AT WESTTOWN SCHOOL, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF, CONSTITUENTS, DIS- SOLVED (MG/L)
FEB , 1970										
21...	--	--	--	22	20	--	--	--	--	--
MAY										
09...	--	--	--	36	6.3	--	--	--	120	--
OCT										
26...	--	--	--	26	15	--	--	--	82	--
MAY , 1971										
17...	--	--	--	17	12	--	--	--	130	--
OCT										
11...	--	--	--	19	12	--	--	--	129	--
OCT , 1972										
10...	--	--	--	18	18	--	--	--	116	--
OCT , 1973										
05...	58	0	48	21	15	.40	17	--	--	120
OCT , 1974										
29...	59	0	48	24	16	.20	18	142	--	130
OCT , 1975										
31...	65	0	53	24	16	.20	17	145	--	130
OCT , 1976										
28...	57	0	47	27	17	.10	17	141	--	130
OCT , 1977										
18...	53	0	43	22	16	.10	11	133	--	120
OCT , 1978										
24...	63	0	52	26	20	.10	16	155	--	140
OCT , 1979										
31...	--	--	42	24	19	.10	16	--	--	--
NOV , 1980										
03...	--	--	--	30	25	.00	18	157	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
FEB , 1970									
21...	2.2	--	--	--	--	--	--	--	.100
MAY									
09...	1.9	--	--	--	--	--	--	--	.250
OCT									
26...	2.1	.021	--	1.28	--	--	--	.050	.330
MAY , 1971									
17...	2.3	.040	--	.320	.29	--	--	.160	.033
OCT									
11...	1.4	.030	--	.010	.70	--	--	.193	.013
OCT , 1972									
10...	2.5	.030	--	.010	.18	--	--	.230	.200
OCT , 1973									
05...	2.2	.001	2.2	.270	.73	1.0	3.2	.510	.460
OCT , 1974									
29...	2.0	--	--	.610	.79	1.4	--	.590	.480
OCT , 1975									
31...	2.3	--	--	.900	1.1	2.0	--	.370	.230
OCT , 1976									
28...	2.9	.010	2.9	.070	.28	.35	3.3	.350	.290
OCT , 1977									
18...	1.8	.110	1.9	.160	1.8	2.0	3.9	.340	.180
OCT , 1978									
24...	3.2	.020	3.2	.070	.47	.54	3.7	.640	.550
OCT , 1979									
31...	--	--	2.8	.180	1.2	1.4	4.2	.220	--
NOV , 1980									
03...	3.7	.030	3.7	.270	.12	.39	4.1	.640	.510

## 01476835 - EAST BRANCH CHESTER CREEK AT WESTTOWN SCHOOL, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
FEB , 1970										
21...	--	--	--	--	--	--	--	--	--	--
MAY										
09...	--	<200	--	<500	--	<250	--	<250	--	--
OCT										
26...	--	<100	--	<900	--	<250	--	<100	--	--
MAY , 1971										
17...	--	<150	--	<200	--	<250	--	880	--	--
OCT										
11...	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1972										
10...	--	<100	--	<200	--	<250	--	500	--	--
OCT , 1973										
05...	ND	--	ND	--	3	--	ND	460	--	ND
OCT , 1974										
29...	ND	--	ND	--	ND	--	ND	--	180	<2
OCT , 1975										
31...	<2	--	ND	--	ND	--	<20	--	130	2
OCT , 1976										
28...	<2	--	<20	--	ND	--	<20	--	110	5
OCT , 1977										
18...	ND	--	<2	--	ND	--	4	--	110	8
OCT , 1978										
24...	ND	--	ND	--	ND	--	5	--	210	2
OCT , 1979										
31...	--	10	--	--	--	10	--	--	--	--
NOV , 1980										
03...	4	--	1	--	0	--	2	--	80	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
FEB , 1970										
21...	--	--	--	--	--	--	--	--	--	--
MAY										
09...	<100	<250	--	<250	--	<250	--	--	--	--
OCT										
26...	<50	<250	--	<250	--	<20	--	--	--	--
MAY , 1971										
17...	<50	280	--	<250	--	<20	--	--	41	1.4
OCT										
11...	<50	<250	--	<250	--	<50	--	--	38	1.2
OCT , 1972										
10...	<50	<250	--	<250	--	<20	--	--	5	.11
OCT , 1973										
05...	--	140	--	--	ND	--	<20	--	--	--
OCT , 1974										
29...	--	--	140	--	3	--	<20	--	--	--
OCT , 1975										
31...	--	--	120	--	2	--	<20	--	--	--
OCT , 1976										
28...	--	--	100	--	<2	--	<20	--	--	--
OCT , 1977										
18...	--	--	70	--	2	--	<20	.00	--	--
OCT , 1978										
24...	--	--	70	--	<2	--	ND	.00	--	--
OCT , 1979										
31...	--	--	--	--	--	0	--	--	--	--
NOV , 1980										
03...	--	--	370	--	0	--	2	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01476840 - TRIBUTARY (GOOSE CREEK) TO EAST BRANCH CHESTER CREEK NEAR WEST CHESTER, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sub>d</sub>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
MAR , 1970										
14...	--	84215 <sub>a</sub> /	9.1	425	7.7	6.0	--	--	--	--
MAY										
01...	--	84215	14	750	8.0	24.0	--	<1	--	6
OCT										
26...	--	84215	2.0	600	7.5	15.0	--	4800	--	10
MAY , 1971										
17...	--	84215	--	980	7.6	18.0	--	2200	31	8
OCT										
11...	--	84215	--	460	7.6	15.0	--	268000	2700	600
OCT , 1972										
10...	1115	84215	--	800	6.4	12.0	--	19000	220	670
OCT , 1973										
05...	1225	1028 <sub>b</sub> /	--	940	7.3	21.0	--	19000	220	670
OCT , 1974										
29...	1630	1028	--	700	7.3	16.0	6.5	--	--	--
NOV , 1975										
07...	1530	1028	--	980	7.5	18.5	5.9	--	--	--
OCT , 1976										
20...	1045	1028	--	900	7.5	15.0	5.6	--	--	--
OCT , 1977										
18...	1515	80010 <sub>c</sub> /	--	950	7.3	15.0	7.2	--	--	--
OCT , 1978										
24...	1515	80010	--	1030	7.6	14.5	4.6	--	--	--
OCT , 1979										
31...	1430	80010	--	1010	7.3	9.0	5.9	--	--	--
NOV , 1980										
03...	1430	80010	--	1250	5.4	13.5	7.7	--	--	--

DATE	HARD- NESS (MG/L AS CACO <sub>3</sub> )	HARD- NESS NONCAR- BONATE (MG/L CACO <sub>3</sub> )	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL, RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL, RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL, RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAR , 1970										
14...	--	--	--	--	--	--	--	--	--	--
MAY										
01...	--	--	19	--	10	--	61	--	16	--
OCT										
26...	--	--	39	--	12	--	67	--	22	--
MAY , 1971										
17...	--	--	36	--	13	--	42	--	13	--
OCT										
11...	--	--	42	--	15	--	28	--	14	--
OCT , 1972										
10...	--	--	32	--	11	--	58	--	16	--
OCT , 1973										
05...	150	23	--	38	--	13	--	76	--	26
OCT , 1974										
29...	170	34	--	44	--	14	--	100	--	32
NOV , 1975										
07...	150	150	--	38	--	14	--	76	--	28
OCT , 1976										
20...	150	22	--	37	--	14	--	64	--	25
OCT , 1977										
18...	170	33	--	46	--	14	--	72	--	27
OCT , 1978										
24...	170	130	--	46	--	14	--	75	--	27
OCT , 1979										
31...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
03...	160	--	--	39	--	15	--	110	--	31

<sub>a</sub>/ Chester County Health Department Laboratory, Pennsylvania.

<sub>b</sub>/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

<sub>c</sub>/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

<sub>d</sub>/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

## 01476840 - TRIBUTARY (GOOSE CREEK) TO EAST BRANCH CHESTER CREEK NEAR WEST CHESTER, PA--CONTINUED

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
MAR , 1970										
MAY 14...	--	--	--	--	--	--	--	--	--	--
MAY 01...	--	--	--	--	96	--	--	--	425	--
OCT 26...	--	--	--	100	110	--	--	--	487	--
MAY 17, 1971	--	--	--	73	59	--	--	--	144	--
OCT 11...	--	--	--	60	41	--	--	--	315	--
OCT 10, 1972	--	--	--	110	98	--	--	--	462	--
OCT 05, 1973	150	0	126	94	110	.90	23	--	--	460
OCT 29, 1974	160	0	134	99	150	.70	21	564	--	540
NOV 07, 1975	8	0	7	94	120	.30	23	490	--	400
OCT 20, 1976	160	0	128	94	100	.10	22	496	--	430
OCT 18, 1977	170	0	140	100	140	.10	20	525	--	500
OCT 24, 1978	56	0	46	99	160	.20	21	533	--	470
OCT 31, 1979	--	--	110	91	130	.10	22	--	--	--
NOV 03, 1980	--	--	--	110	150	.10	24	624	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
MAR , 1970									
MAY 14...	--	--	--	--	--	--	--	--	--
MAY 01...	3.8	--	--	--	--	--	--	--	4.31
OCT 26...	5.5	.640	--	3.70	.02	--	--	6.00	--
MAY 17, 1971	5.9	.182	--	14.0	1.0	--	--	2.32	2.25
OCT 11...	4.0	.240	--	10.0	1.7	--	--	.451	.350
OCT 10, 1972	2.3	.540	--	27.5	3.4	--	--	5.70	3.70
OCT 05, 1973	7.0	--	--	.190	2.7	2.9	--	6.50	5.90
OCT 29, 1974	7.9	--	--	.600	4.8	5.4	--	6.30	5.10
NOV 07, 1975	5.6	--	--	26.0	5.0	31	--	4.40	4.00
OCT 20, 1976	2.2	.540	2.7	24.0	7.0	31	34	3.10	3.40
OCT 18, 1977	2.1	.610	2.7	31.0	33	64	67	5.40	4.50
OCT 24, 1978	1.7	.690	2.4	33.0	6.0	39	41	5.20	4.70
OCT 31, 1979	--	--	17	27.0	100	130	150	7.30	--
NOV 03, 1980	30	1.20	31	12.0	3.0	15	46	6.20	5.60

## 01476840 - TRIBUTARY (GOOSE CREEK) TO EAST BRANCH CHESTER CREEK NEAR WEST CHESTER, PA--CONTINUED

DATE	CADMIUM TOTAL DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, TOTAL DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, TOTAL DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, TOTAL DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, TOTAL DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL DIS- SOLVED (UG/L AS PB)
MAR , 1970	--	--	--	--	--	--	--	--	--	--
MAY 14...	--	--	--	--	--	--	--	--	--	--
MAY 01...	--	<200	--	<500	--	<250	--	<250	--	--
OCT 26...	--	<100	--	<900	--	<250	--	<250	--	--
MAY 17, 1971	--	<150	--	<200	--	<250	--	800	--	--
OCT 11...	--	<100	--	<200	--	<250	--	2200	--	--
OCT 10, 1972	--	<100	--	<200	--	<250	--	1500	--	--
OCT 05, 1973	20	--	30	--	ND	--	30	1000	--	4
OCT 29, 1974	4	--	<20	--	ND	--	50	--	140	3
NOV 07, 1975	<2	--	ND	--	ND	--	20	--	150	6
OCT 20, 1976	<2	--	<20	--	ND	--	30	--	320	91
OCT 18, 1977	ND	--	2	--	ND	--	ND	--	180	7
OCT 24, 1978	<2	--	ND	--	<2	--	38	--	680	5
OCT 31, 1979	--	10	--	--	--	50	--	--	--	--
NOV 03, 1980	3	--	6	--	0	--	33	--	200	2

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, TOTAL DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, TOTAL DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, TOTAL DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
MAR , 1970	--	--	--	--	--	--	--	--	--	--
MAY 14...	--	--	--	--	--	--	--	--	--	--
MAY 01...	<100	<250	--	<250	--	<250	--	--	--	--
OCT 26...	<50	670	--	<250	--	<40	--	--	--	--
MAY 17, 1971	850	300	--	<250	--	<50	--	--	270	--
OCT 11...	<60	400	--	<250	--	<60	--	--	18	--
OCT 10, 1972	<70	<250	--	<250	--	<70	--	--	--	--
OCT 05, 1973	--	290	--	--	4	--	80	--	--	--
OCT 29, 1974	--	--	200	--	6	--	90	--	--	--
NOV 07, 1975	--	--	140	--	4	--	120	--	--	--
OCT 20, 1976	--	--	200	--	5	--	90	--	--	--
OCT 18, 1977	--	--	190	--	2	--	80	.10	--	--
OCT 24, 1978	--	--	280	--	5	--	360	.70	--	--
OCT 31, 1979	--	--	--	--	--	360	--	--	--	--
NOV 03, 1980	--	--	3000	--	3	--	340	.40	--	--



TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01478120 - EAST BRANCH WHITE CLAY CREEK AT AVONDALE, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sup>d</sup> /	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
JUN , 1970										
02...	--	84215 <sup>a</sup> /	10	190	8.0	22.0	--	5500	--	12
OCT										
27...	--	84215	4.8	200	8.4	12.0	--	900	--	570
MAY , 1971										
18...	--	84215	12	210	7.3	16.0	--	5000	740	210
OCT										
12...	--	84215	10	230	7.0	14.0	--	2000	2800	1000
OCT , 1972										
17...	1000	84215	8.3	228	8.0	12.0	--	1200	440	340
OCT , 1973										
08...	1040	1028 <sup>b</sup> /	--	310	6.8	15.0	7.2	6000	360	440
OCT , 1974										
30...	1035	1028	--	293	7.1	11.5	9.0	--	--	--
NOV , 1975										
06...	1100	1028	--	280	7.9	10.5	12.3	--	--	--
OCT , 1976										
29...	1445	1028	--	320	7.7	9.0	12.2	--	--	--
NOV , 1977										
01...	1330	80010 <sup>c</sup> /	--	260	8.3	13.0	13.4	--	--	--
OCT , 1978										
25...	1230	80010	--	295	7.7	9.0	12.8	--	--	--
NOV , 1979										
06...	1330	80010	--	272	6.8	8.0	13.2	--	--	--
NOV , 1980										
20...	1500	80010	--	340	7.7	6.0	12.2	--	--	--

DATE	HARD- NESS (MG/L AS CACO <sub>3</sub> )	HARD- NESS, NONCAR- BONATE (MG/L CACO <sub>3</sub> )	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JUN , 1970										
02...	--	--	22	--	11	--	7.0	--	3.0	--
OCT										
27...	--	--	22	--	11	--	6.6	--	3.7	--
MAY , 1971										
18...	--	--	26	--	12	--	6.3	--	2.5	--
OCT										
12...	--	--	29	--	12	--	6.6	--	3.9	--
OCT , 1972										
17...	--	--	30	--	11	--	7.0	--	2.4	--
OCT , 1973										
08...	110	34	--	26	--	12	--	7.5	--	2.7
OCT , 1974										
30...	120	32	--	29	--	12	--	6.2	--	2.4
NOV , 1975										
06...	120	42	--	29	--	12	--	6.4	--	2.6
OCT , 1976										
29...	120	38	--	28	--	12	--	6.7	--	3.0
NOV , 1977										
01...	130	53	--	29	--	13	--	7.4	--	3.0
OCT , 1978										
25...	130	47	--	30	--	13	--	6.6	--	2.9
NOV , 1979										
06...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
20...	120	--	--	27	--	12	--	7.9	--	2.7

<sup>a</sup>/ Chester County Health Department Laboratory, Pennsylvania.

<sup>b</sup>/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

<sup>c</sup>/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

<sup>d</sup>/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01478120 - EAST BRANCH WHITE CLAY CREEK AT AVONDALE, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
JUN , 1970	--	--	--	23	11	--	--	--	211	--
OCT 02...	--	--	--	31	17	--	--	--	144	--
MAY , 1971	--	--	--	24	11	--	--	--	58	--
OCT 18...	--	--	--	24	13	--	--	--	199	--
OCT 12...	--	--	--	27	14	--	--	--	155	--
OCT 17...	98	0	80	21	14	.40	14	--	--	150
OCT 08...	110	0	90	23	13	.10	12	173	--	150
NOV 30...	97	0	80	23	14	<.10	13	162	--	150
OCT 06...	99	0	81	24	14	.10	16	174	--	150
NOV 29...	89	0	73	23	14	<.10	14	174	--	150
OCT 01...	100	0	82	24	14	.10	15	167	--	150
NOV 25...	--	--	73	25	13	.10	15	--	--	--
NOV 06...	--	--	--	29	16	.10	16	183	--	--
NOV 20...										

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
JUN , 1970									
OCT 02...	3.7	--	--	--	--	--	--	--	.084
OCT 27...	2.5	.021	--	--	.03	--	--	.050	.033
MAY , 1971	4.2	.010	--	--	.03	--	--	.060	.020
OCT 18...	3.5	.010	--	.490	.66	--	--	.114	.030
OCT 12...	4.3	.010	--	.010	.16	--	--	.080	.060
OCT 17...	3.8	<.010	3.8	.030	.43	.46	4.3	.090	.070
OCT 08...	4.5	--	--	.020	.36	.38	--	.030	.020
NOV 30...	4.3	--	--	<.010	.53	.53	--	.020	.010
OCT 06...	4.0	.010	4.0	.040	.26	.30	4.3	.060	.040
NOV 29...	3.6	.010	3.6	.020	.42	.44	4.0	.040	.020
NOV 01...	4.4	.010	4.4	.040	.13	.17	4.6	.040	.030
OCT 25...	--	--	4.6	.010	.22	.23	4.8	.020	--
NOV 06...	4.0	.010	4.0	.000	.23	.23	4.2	.040	.020
NOV 20...									

## 01478120 - EAST BRANCH WHITE CLAY CREEK AT AVONDALE, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
JUN , 1970										
02...	--	--	--	--	--	--	--	--	--	--
OCT 27...	--	<100	--	<900	--	<250	--	<100	--	--
MAY 18...	--	<150	--	<200	--	<250	--	<200	--	--
OCT 12...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 17...	--	<100	--	<200	--	<250	--	230	--	--
OCT 08...	<2	--	ND	--	ND	--	ND	200	--	ND
OCT 30...	ND	--	ND	--	ND	--	ND	--	30	ND
NOV 06...	<2	--	ND	--	ND	--	ND	--	20	2
OCT 29...	<2	--	<20	--	ND	--	ND	--	40	3
NOV 01...	ND	--	<2	--	ND	--	3	--	50	130
OCT 25...	ND	--	ND	--	<2	--	ND	--	<10	4
NOV 06...	--	10	--	--	--	0	--	--	--	--
NOV 20...	2	--	1	--	1	--	1	--	20	1

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
JUN , 1970										
02...	--	--	--	--	--	--	--	--	14	.38
OCT 27...	<50	<250	--	<250	--	<20	--	--	--	--
MAY 18...	<50	<250	--	<250	--	<20	--	--	11	.37
OCT 12...	<50	<250	--	<250	--	<50	--	--	4	.11
OCT 17...	<50	<250	--	<250	--	<20	--	--	5	.11
OCT 08...	--	20	--	--	ND	--	20	--	--	--
OCT 30...	--	--	20	--	3	--	<20	--	--	--
NOV 06...	--	--	20	--	<2	--	<20	--	--	--
OCT 29...	--	--	80	--	<2	--	<20	--	--	--
NOV 01...	--	--	60	--	ND	--	<20	.00	--	--
OCT 25...	--	--	20	--	2	--	ND	.00	--	--
NOV 06...	--	--	--	--	--	10	--	--	--	--
NOV 20...	--	--	20	--	0	--	1	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01478190 - EAST BRANCH WHITE CLAY CREEK AT WICKERTON, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sub>d</sub>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
JUN , 1970										
02...	--	84215 <sub>a</sub> /	9.2	110	7.2	22.0	--	630	--	16
OCT 27...	--	84215	4.9	120	8.3	12.0	--	1300	--	520
MAY 18...	--	84215	12	150	7.4	18.0	--	5000	510	88
OCT 12...	--	84215	10	145	7.4	14.0	--	6000	14000	7300
OCT 17...	1120	84215	8.8	145	7.6	12.5	--	1400	250	220
OCT 08...	1145	1028 <sub>b</sub> /	--	180	6.8	16.0	--	9400	230	200
OCT 30...	1105	1028	--	180	7.0	12.5	10.2	--	--	--
NOV 06...	1245	1028	--	170	7.8	13.0	12.0	--	--	--
NOV 01...	0930	1028	--	190	7.0	8.0	11.2	--	--	--
NOV 01...	1500	80010 <sub>c</sub> /	--	160	7.6	13.5	12.4	--	--	--
OCT 25...	1545	80010	--	255	6.8	11.0	13.2	--	--	--
NOV 06...	1130	80010	--	167	6.4	8.0	12.4	--	--	--
NOV 20...	1230	80010	--	220	7.2	6.0	13.1	--	--	--

DATE	HARD- NESS (MG/L AS CaCO3)	HARD- NESS NONCAR- BONATE (MG/L CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JUN , 1970										
02...	--	--	9.6	--	4.7	--	6.7	--	3.1	--
OCT 27...	--	--	16	--	5.3	--	7.4	--	3.4	--
MAY 18...	--	--	12	--	5.5	--	6.5	--	2.9	--
OCT 12...	--	--	13	--	5.2	--	5.9	--	4.3	--
OCT 17...	--	--	13	--	5.7	--	8.7	--	2.8	--
OCT 08...	55	22	--	12	--	6.2	--	8.4	--	3.0
OCT 30...	55	20	--	13	--	5.5	--	7.5	--	3.2
NOV 06...	58	24	--	14	--	5.6	--	6.4	--	2.9
NOV 01...	57	24	--	13	--	5.9	--	5.7	--	5.6
NOV 01...	65	23	--	15	--	6.8	--	9.0	--	3.9
OCT 25...	61	25	--	14	--	6.3	--	8.0	--	3.4
NOV 06...	--	--	--	--	--	--	--	--	--	--
NOV 20...	63	--	--	14	--	6.8	--	9.1	--	3.7

<sub>a</sub>/ Chester County Health Department Laboratory, Pennsylvania.  
<sub>b</sub>/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.  
<sub>c</sub>/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.  
<sub>d</sub>/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

## 01478190 - EAST BRANCH WHITE CLAY CREEK AT WICKERTON, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
JUN , 1970										
OCT 02...	--	--	--	11	8.4	--	--	--	173	--
OCT 27...	--	--	--	17	12	--	--	--	66	--
MAY 18 , 1971	--	--	--	25	9.6	--	--	--	87	--
OCT 12...	--	--	--	15	9.4	--	--	--	132	--
OCT 17 , 1972	--	--	--	18	12	--	--	--	85	--
OCT 08 , 1973	41	0	34	9.1	12	.30	15	--	--	86
OCT 30 , 1974	43	0	35	13	12	.10	13	113	--	89
NOV 06 , 1975	41	0	34	10	12	.10	11	93	--	82
NOV 01 , 1976	40	0	33	21	13	.10	14	110	--	98
NOV 01 , 1977	52	0	43	--	--	--	--	--	--	--
OCT 25 , 1978	44	0	36	12	14	.10	13	109	--	93
NOV 06 , 1979	--	--	27	15	12	.10	14	--	--	--
NOV 20 , 1980	--	--	--	17	15	.10	15	128	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
JUN , 1970									
OCT 02...	3.7	--	--	--	--	--	--	--	.232
OCT 27...	2.7	.060	--	.110	.04	--	--	.330	.290
MAY 18 , 1971	3.8	.042	--	.240	.08	--	--	.180	.190
OCT 12...	3.1	.030	--	.960	.76	--	--	.210	.092
OCT 17 , 1972	4.8	.121	--	.330	.37	--	--	.570	.480
OCT 08 , 1973	4.4	<.010	4.4	.130	.66	.79	5.2	--	--
OCT 30 , 1974	4.2	--	--	.170	.61	.78	--	.340	.290
NOV 06 , 1975	4.3	--	--	.010	.72	.73	--	.170	.150
NOV 01 , 1976	2.7	.050	2.7	.090	.66	.75	3.5	.130	.060
NOV 01 , 1977	3.6	.080	3.7	.480	.52	1.0	4.7	.310	.270
OCT 25 , 1978	4.7	.160	4.9	.130	.29	.42	5.3	.310	.300
NOV 06 , 1979	--	--	4.3	.010	.43	.44	4.7	.100	--
NOV 20 , 1980	3.8	.060	3.9	.610	.09	.70	4.6	.300	.270

## 01478190 - EAST BRANCH WHITE CLAY CREEK AT WICKERTON, PA--Continued

DATE	CADMIUM TOTAL DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
JUN , 1970										
OCT 02...	--	--	--	--	--	--	--	--	--	--
OCT 27...	--	<100	--	<900	--	<250	--	<100	--	--
MAY , 1971										
OCT 18...	--	<150	--	<200	--	<250	--	180	--	--
OCT 12...	--	<100	--	<200	--	<250	--	150	--	--
OCT , 1972										
OCT 17...	--	<100	--	<200	--	<250	--	240	--	--
OCT , 1973										
OCT 08...	ND	--	ND	--	3	--	ND	170	--	ND
OCT , 1974										
OCT 30...	ND	--	ND	--	ND	--	ND	--	80	ND
NOV , 1975										
NOV 06...	ND	--	ND	--	ND	--	ND	--	60	2
NOV , 1976										
NOV 01...	<2	--	<20	--	ND	--	<20	--	200	4
NOV , 1977										
NOV 01...	ND	--	<2	--	ND	--	3	--	180	2
OCT , 1978										
OCT 25...	ND	--	ND	--	<2	--	3	--	50	3
NOV , 1979										
NOV 06...	--	10	--	--	--	0	--	--	--	--
NOV , 1980										
NOV 20...	1	--	1	--	1	--	3	--	90	2

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
JUN , 1970										
OCT 02...	--	<250	--	--	--	--	--	--	16	.40
OCT 27...	<50	450	--	<250	--	<20	--	--	--	--
MAY , 1971										
OCT 18...	<50	<250	--	<250	--	<20	--	--	6	.19
OCT 12...	<50	<250	--	<250	--	<50	--	--	5	.14
OCT , 1972										
OCT 17...	<50	<250	--	<250	--	<20	--	--	3	.07
OCT , 1973										
OCT 08...	--	30	--	--	ND	--	<20	--	--	--
OCT , 1974										
OCT 30...	--	--	30	--	4	--	<20	--	--	--
NOV , 1975										
NOV 06...	--	--	20	--	<2	--	<20	--	--	--
NOV , 1976										
NOV 01...	--	--	70	--	3	--	<20	--	--	--
NOV , 1977										
NOV 01...	--	--	70	--	ND	--	20	.10	--	--
OCT , 1978										
OCT 25...	--	--	30	--	<2	--	ND	.10	--	--
NOV , 1979										
NOV 06...	--	--	--	--	--	10	--	--	--	--
NOV , 1980										
NOV 20...	--	--	50	--	0	--	3	.10	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01478220 - WEST BRANCH WHITE CLAY CREEK NEAR CHESTERVILLE, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sub>d</sub>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
JUN , 1970										
OCT 02...	--	84215 <sub>a</sub> /	7.3	100	7.8	24.0	--	22	--	<1
OCT 27...	--	84215	3.9	90	7.3	11.0	--	490	--	130
MAY , 1971										
OCT 24...	--	84215	9.7	130	7.3	18.0	--	2000	200	130
OCT 12...	--	84215	9.9	115	7.4	15.0	--	9000	1100	2200
OCT 17, 1972	1245	84215	8.2	100	7.8	13.5	--	600	84	150
OCT 08, 1973	1245	1028 <sub>b</sub> /	--	140	7.2	17.5	--	9000	75	170
OCT 30, 1974	1145	1028	--	130	6.9	12.5	10.8	--	--	--
NOV 06, 1975	1330	1028	--	130	8.0	13.0	11.9	--	--	--
NOV 01, 1976	1030	1028	--	170	7.0	8.0	11.6	--	--	--
NOV 01, 1977	1530	80010 <sub>c</sub> /	--	140	7.4	13.0	12.0	--	--	--
OCT 26, 1978	0945	80010	--	170	6.7	10.0	12.0	--	--	--
NOV 06, 1979	1030	80010	--	139	6.6	6.5	12.8	--	--	--
NOV 20, 1980	1345	80010	--	200	7.3	5.0	13.6	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JUN , 1970										
OCT 02...	--	--	6.8	--	3.1	--	6.6	--	2.6	--
OCT 27...	--	--	9.0	--	3.5	--	6.6	--	4.3	--
MAY , 1971										
OCT 24...	--	--	9.0	--	3.6	--	6.8	--	2.3	--
OCT 12...	--	--	8.4	--	3.3	--	6.2	--	3.6	--
OCT 17, 1972	--	--	8.7	--	3.4	--	6.0	--	2.5	--
OCT 08, 1973	39	18	--	9.0	--	3.9	--	6.5	--	2.8
OCT 30, 1974	40	15	--	9.7	--	3.8	--	5.5	--	2.6
NOV 06, 1975	41	20	--	11	--	3.4	--	5.7	--	3.0
NOV 01, 1976	49	17	--	12	--	4.6	--	5.5	--	6.8
NOV 01, 1977	45	18	--	11	--	4.3	--	7.0	--	4.4
OCT 26, 1978	45	24	--	11	--	4.2	--	6.4	--	2.9
NOV 06, 1979	--	--	--	--	--	--	--	--	--	--
NOV 20, 1980	51	--	--	12	--	5.2	--	7.7	--	3.5

a/ Chester County Health Department Laboratory, Pennsylvania.

b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01478220 - WEST BRANCH WHITE CLAY CREEK NEAR CHESTERVILLE, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
JUN , 1970										
02...	--	--	--	19	7.4	--	--	--	94	--
OCT 27...	--	--	--	16	12	--	--	--	50	--
MAY , 1971										
24...	--	--	--	13	9.1	--	--	--	64	--
OCT 12...	--	--	--	17	6.6	--	--	--	97	--
OCT , 1972										
17...	--	--	--	18	8.8	--	--	--	62	--
OCT , 1973										
08...	25	0	21	10	11	.40	13	--	--	69
OCT , 1974										
30...	30	0	25	12	8.8	.10	12	80	--	69
NOV , 1975										
06...	27	0	22	12	9.3	.10	11	86	--	69
NOV , 1976										
01...	39	0	32	29	10	.10	13	107	--	100
NOV , 1977										
01...	33	0	27	15	9.7	<.10	13	91	--	81
OCT , 1978										
26...	26	0	21	12	11	.10	12	92	--	73
NOV , 1979										
06...	--	--	20	17	10	.10	13	--	--	--
NOV , 1980										
20...	--	--	--	19	14	.10	15	109	--	--

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
JUN , 1970									
02...	2.4	--	--	--	--	--	--	--	.131
OCT 27...	1.9	.010	--	.130	.03	--	--	.010	.010
MAY , 1971									
24...	2.8	<.010	--	--	.08	--	--	.030	.000
OCT 12...	2.2	<.010	--	.520	.83	--	--	.062	.010
OCT , 1972									
17...	3.4	<.010	--	.010	.24	--	--	.020	.020
OCT , 1973									
08...	2.3	--	--	.070	.66	.73	--	.040	.020
OCT , 1974									
30...	3.2	--	--	.030	.53	.56	--	.020	.010
NOV , 1975									
06...	2.9	--	--	<.010	.56	.56	--	.010	<.010
NOV , 1976									
01...	2.0	.010	2.0	.080	.50	.58	2.6	.080	.050
NOV , 1977									
01...	2.0	.010	2.0	.050	.33	.38	2.4	.010	<.010
OCT , 1978									
26...	2.5	.010	2.5	.060	.31	.37	2.9	.010	<.010
NOV , 1979									
06...	--	--	--	.040	.15	.19	--	.100	--
NOV , 1980									
20...	3.0	.010	3.0	.010	.15	.16	3.2	.020	.000



## 01478220 - WEST BRANCH WHITE CLAY CREEK NEAR CHESTERVILLE, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
JUN , 1970	--	--	--	--	--	--	--	--	--	--
OCT 02...	--	--	--	--	--	--	--	--	--	--
OCT 27...	--	<100	--	<900	--	<250	--	<100	--	--
MAY 24... 1971	--	<150	--	<200	--	<250	--	150	--	--
OCT 12...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 17... 1972	--	<100	--	<200	--	<250	--	160	--	--
OCT 17... 1973	ND	--	ND	--	4	--	ND	90	--	ND
OCT 08... 1974	ND	--	ND	--	ND	--	ND	--	90	ND
OCT 30... 1975	ND	--	ND	--	<2	--	ND	--	90	2
NOV 06... 1976	<2	--	<20	--	ND	--	<20	--	170	5
NOV 01... 1977	ND	--	ND	--	ND	--	ND	--	140	ND
OCT 01... 1978	<2	--	ND	--	<2	--	<2	--	90	13
NOV 26... 1979	--	10	--	--	--	10	--	--	--	--
NOV 06... 1980	0	--	1	--	1	--	3	--	100	1
NOV 20...										

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
JUN , 1970	--	--	--	--	--	--	--	--	9	.18
OCT 02...	--	--	--	--	--	--	--	--	--	--
OCT 27...	<50	500	--	<250	--	<20	--	--	--	--
MAY 24... 1971	<50	<250	--	<250	--	<20	--	--	3	.08
OCT 12...	<50	<250	--	<250	--	<50	--	--	5	.13
OCT 17... 1972	<50	<250	--	<250	--	<20	--	--	3	.07
OCT 17... 1973	--	20	--	--	ND	--	<20	--	--	--
OCT 08... 1974	--	--	40	--	2	--	20	--	--	--
OCT 30... 1975	--	--	40	--	<2	--	<20	--	--	--
NOV 06... 1976	--	--	50	--	<2	--	<20	--	--	--
NOV 01... 1977	--	--	60	--	ND	--	20	.00	--	--
OCT 01... 1978	--	--	30	--	<2	--	ND	.00	--	--
NOV 26... 1979	--	--	--	--	--	10	--	--	--	--
NOV 06... 1980	--	--	150	--	0	--	2	.00	--	--
NOV 20...										

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01479680 - WEST BRANCH RED CLAY CREEK AT KENNETT SQUARE, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sub>d</sub>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
JUN , 1970										
02...	--	84215 <sub>a</sub> /	12	150	7.5	20.0	--	--	--	--
OCT 27...	--	84215	5.2	360	7.9	14.0	--	--	--	190000
MAY 18...	--	84215	14	215	7.6	5.0	--	145000	28000	940
OCT 12...	--	84215	12	225	7.5	12.0	--	8000	1600	1400
OCT 17...	0840	84215	9.0	215	7.5	11.5	--	5000	9800	1600
OCT 08...	0955	1028 <sub>b</sub> /	--	280	6.7	15.0	10.0	>990000	47000	5200
OCT 30...	1015	1028	--	240	7.1	11.5	10.2	--	--	--
NOV 06...	1030	1028	--	240	7.5	10.5	11.6	--	--	--
OCT 29...	1245	1028	--	320	7.3	8.0	12.2	--	--	--
NOV 01...	1000	80010 <sub>c</sub> /	--	250	7.3	11.5	12.4	--	--	--
OCT 25...	1145	80010	--	320	7.3	10.0	12.0	--	--	--
NOV 06...	0800	80010	--	229	6.1	6.5	11.8	--	--	--
NOV 17...	0930	80010	--	275	7.3	4.5	14.0	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JUN , 1970										
02...	--	--	15	--	7.4	--	8.8	--	3.1	--
OCT 27...	--	--	33	--	15	--	19	--	19	--
MAY 18...	--	--	18	--	8.8	--	7.9	--	3.4	--
OCT 12...	--	--	22	--	8.2	--	8.0	--	5.9	--
OCT 17...	--	--	23	--	9.7	--	10	--	3.3	--
OCT 08...	94	28	--	21	--	10	--	9.5	--	3.6
OCT 30...	96	32	--	22	--	10	--	7.0	--	2.8
NOV 06...	95	33	--	22	--	9.8	--	7.0	--	3.3
OCT 29...	96	33	--	22	--	10	--	8.8	--	3.5
NOV 01...	100	35	--	23	--	11	--	8.0	--	3.4
OCT 25...	110	40	--	25	--	11	--	9.0	--	3.2
NOV 06...	--	--	--	--	--	--	--	--	--	--
NOV 17...	110	--	--	25	--	11	--	7.2	--	3.1

<sub>a</sub>/ Chester County Health Department Laboratory, Pennsylvania.  
<sub>b</sub>/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.  
<sub>c</sub>/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.  
<sub>d</sub>/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

## 01479680 - WEST BRANCH RED CLAY CREEK AT KENNETT SQUARE, PA--continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SUM OF SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
JUN , 1970										
02...	--	--	--	12	7.4	--	--	--	103	--
OCT 27...	--	--	--	52	33	--	--	--	361	--
MAY 18, 1971	--	--	--	43	11	--	--	--	166	--
OCT 12...	--	--	--	26	13	--	--	--	173	--
OCT 17, 1972	--	--	--	28	14	--	--	--	130	--
OCT 08, 1973	81	0	66	20	15	.40	15	--	--	130
OCT 30, 1974	78	0	64	21	11	.20	14	149	--	130
NOV 06, 1975	76	0	62	22	11	.10	13	118	--	130
OCT 29, 1976	77	0	63	23	15	.10	17	150	--	140
NOV 01, 1977	83	0	68	22	12	<.10	15	150	--	140
OCT 25, 1978	83	0	68	24	15	.10	16	152	--	140
NOV 06, 1979	--	--	54	24	11	.10	15	--	--	--
NOV 17, 1980	--	--	--	22	13	.10	15	169	--	--

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
JUN , 1970									
02...	--	1.0	--	--	--	--	--	--	.110
OCT 27...	--	1.8	.230	--	2.21	.07	--	3.10	2.60
MAY 18, 1971	--	3.7	.020	--	--	.24	--	.010	.230
OCT 12...	--	2.8	.010	--	.590	.96	--	.120	.033
OCT 17, 1972	--	3.8	.020	--	.460	.35	--	.190	.140
OCT 08, 1973	130	3.7	.010	3.7	.200	.56	.76	4.5	.060
OCT 30, 1974	130	4.3	--	--	.050	.43	.48	--	.050
NOV 06, 1975	130	4.3	--	--	.010	.64	.65	--	.050
OCT 29, 1976	140	3.5	.030	3.5	.090	.26	.35	3.9	.090
NOV 01, 1977	140	3.2	.010	3.2	.090	.51	.60	3.8	.040
OCT 25, 1978	140	3.7	.040	3.7	.100	.17	.27	4.0	.030
NOV 06, 1979	--	--	--	3.7	.010	.22	.23	3.9	.060
NOV 17, 1980	--	4.0	.010	4.0	.010	.44	.45	4.5	.050

## 01479680 - WEST BRANCH RED CLAY CREEK AT KENNETT SQUARE, PA--Continued

DATE	CADMIUM TOTAL DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, TOTAL DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, TOTAL DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, TOTAL DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, TOTAL DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL DIS- SOLVED (UG/L AS PB)
JUN , 1970	--	--	--	--	--	--	--	--	--	--
OCT 02...	--	--	--	--	--	--	--	--	--	--
OCT 27...	--	<100	--	<900	--	<250	--	200	--	--
MAY , 1971	--	<150	--	<200	--	<250	--	180	--	--
OCT 18...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 12...	--	<100	--	<200	--	<250	--	<320	--	--
OCT 17...	--	<100	--	<200	--	<250	--	<320	--	--
OCT 08...	ND	--	ND	--	ND	--	ND	120	--	<2
OCT 30...	ND	--	ND	--	ND	--	ND	--	70	ND
NOV , 1975	ND	--	ND	--	<2	--	ND	--	50	<2
OCT 06...	<2	--	<20	--	ND	--	ND	--	60	4
NOV 29...	ND	--	<2	--	ND	--	3	--	90	5
OCT 01...	ND	--	ND	--	<2	--	<2	--	60	5
NOV 25...	--	10	--	--	--	0	--	--	--	--
NOV 06...	2	--	.00	--	1	--	1	--	50	1
NOV 17...										

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, TOTAL DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, TOTAL DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, TOTAL DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
JUN , 1970	--	--	--	--	--	--	--	--	5	.16
OCT 02...	--	--	--	--	--	--	--	--	--	--
OCT 27...	<50	420	--	<250	--	<20	--	--	--	--
MAY , 1971	<50	<250	--	<250	--	<20	--	--	7	.26
OCT 18...	<50	<250	--	<250	--	<50	--	--	7	.23
OCT 12...	<50	--	--	<250	--	<20	--	--	--	--
OCT 17...	<50	--	--	<250	--	<20	--	--	--	--
OCT 08...	--	60	--	--	ND	--	30	--	--	--
OCT 30...	--	--	30	--	3	--	ND	--	--	--
NOV , 1975	--	--	40	--	2	--	<20	--	--	--
OCT 06...	--	--	60	--	ND	--	<20	--	--	--
NOV 29...	--	--	40	--	ND	--	20	.00	--	--
OCT 01...	--	--	50	--	3	--	ND	.00	--	--
NOV 25...	--	--	--	--	--	10	--	--	--	--
NOV 06...	--	--	40	--	0	--	2	.00	--	--
NOV 17...	--	--	--	--	--	--	--	--	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01479800 - EAST BRANCH RED CLAY CREEK NEAR FIVE POINT, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sub>d</sub>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
JUN , 1970										
OCT 02 . . .	--	84215 <sup>a</sup> /	9.1	135	8.0	17.0	--	--	--	--
OCT 27 . . .	--	84215	4.6	170	8.1	11.0	--	1000	--	280
MAY 18 . . .	--	84215	13	235	7.3	12.0	--	38000	850	320
OCT 12 . . .	--	84215	12	215	7.6	15.0	--	68000	3900	3200
OCT 17 . . .	0730	84215	8.0	215	7.4	11.0	--	3700	530	660
OCT 08 . . .	0910	1028 <sup>b</sup> /	--	290	7.1	14.0	--	34300	400	230
OCT 30 . . .	0945	1028	--	260	7.0	11.0	11.0	--	--	--
NOV 06 . . .	0900	1028	--	240	7.6	10.5	12.5	--	--	--
OCT 29 . . .	1330	1028	--	310	7.4	8.0	13.2	--	--	--
NOV 01 . . .	1130	80010 <sup>c</sup> /	--	240	7.9	11.0	14.4	--	--	--
OCT 01 . . .	1045	80010	--	320	7.2	8.5	13.0	--	--	--
NOV 25 . . .	0900	80010	--	257	6.5	6.0	12.4	--	--	--
NOV 06 . . .	1100	80010	--	280	7.4	3.5	16.3	--	--	--

DATE	HARD- NESS (MG/L AS CaCO <sub>3</sub> )	HARD- NESS NONCAR- BONATE (MG/L AS CaCO <sub>3</sub> )	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JUN , 1970										
OCT 02 . . .	--	--	16	--	7.4	--	8.0	--	2.9	--
OCT 27 . . .	--	--	23	--	9.0	--	11	--	5.3	--
MAY 18 . . .	--	--	22	--	8.8	--	8.5	--	4.5	--
OCT 12 . . .	--	--	22	--	8.2	--	7.5	--	5.1	--
OCT 17 . . .	--	--	27	--	7.3	--	10	--	3.0	--
OCT 08 . . .	92	30	--	21	--	9.6	--	12	--	4.5
OCT 30 . . .	100	48	--	24	--	10	--	10	--	3.2
NOV 06 . . .	98	41	--	24	--	9.3	--	8.0	--	3.3
OCT 29 . . .	100	46	--	25	--	10	--	13	--	4.5
NOV 01 . . .	110	45	--	26	--	11	--	12	--	4.5
OCT 01 . . .	110	48	--	27	--	10	--	9.0	--	3.5
NOV 25 . . .	--	--	--	--	--	--	--	--	--	--
NOV 06 . . .	--	--	--	--	--	--	--	--	--	--
NOV 17 . . .	110	--	--	27	--	10	--	12	--	3.6

<sup>a</sup>/ Chester County Health Department Laboratory, Pennsylvania.

<sup>b</sup>/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

<sup>c</sup>/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

<sup>d</sup>/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01479800 - EAST BRANCH RED CLAY CREEK NEAR FIVE POINT, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
JUN , 1970										
02...	--	--	--	--	8.4	--	--	--	172	--
OCT 27...	--	--	--	25	19	--	--	--	153	--
MAY 18...	--	--	--	30	14	--	--	--	149	--
OCT 12...	--	--	--	30	12	--	--	--	178	--
OCT 17...	--	--	--	38	16	--	--	--	137	--
OCT 08...	75	0	62	27	17	.30	16	--	--	140
OCT 30...	65	0	53	28	17	.10	14	168	--	140
NOV 06...	69	0	57	29	15	.10	14	117	--	140
OCT 29...	71	0	58	32	24	.10	19	182	--	160
NOV 01...	79	0	65	33	21	.10	15	179	--	160
OCT 25...	74	0	61	33	20	.10	17	166	--	160
NOV 06...	--	--	52	33	15	.10	56	--	--	--
NOV 17...	--	--	--	39	18	.10	17	191	--	--

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
JUN , 1970									
02...	2.2	--	--	--	--	--	--	--	.013
OCT 27...	2.2	.020	--	.010	.01	--	--	.052	.030
MAY 18...	3.8	.030	--	.070	.24	--	--	.072	.023
OCT 12...	3.3	.020	--	.600	.94	--	--	.101	.030
OCT 17...	4.0	.011	--	.020	.26	--	--	.070	.060
OCT 08...	3.3	<.010	3.3	.080	.80	.88	4.2	.030	.030
OCT 30...	8.1	--	--	.040	.49	.53	--	.030	.030
NOV 06...	3.6	--	--	.010	.78	.79	--	.030	.010
OCT 29...	3.1	.020	3.1	.040	.31	.35	3.5	.050	.020
NOV 01...	2.6	.010	2.6	.020	.33	.35	3.0	.050	.030
OCT 25...	4.0	.020	4.0	.090	.01	.10	4.1	.060	.040
NOV 06...	--	--	--	--	--	--	--	--	--
NOV 17...	3.4	.020	3.4	.010	.30	.31	3.7	.180	.080

## 01479800 - EAST BRANCH RED CLAY CREEK NEAR FIVE POINT, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
JUN , 1970	--	--	--	--	--	--	--	--	--	--
OCT 02...	--	--	--	--	--	--	--	--	--	--
OCT 27...	--	<100	--	<900	--	<250	--	<100	--	--
MAY 18, 1971	--	<150	--	<200	--	<250	--	1500	--	--
OCT 12...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 17, 1972	--	<100	--	<200	--	<250	--	<210	--	--
OCT 17, 1973	--	<100	--	<200	--	<250	--	<210	--	--
OCT 08, 1974	ND	--	ND	--	ND	--	<20	110	--	2
OCT 30, 1974	ND	--	ND	--	ND	--	ND	--	50	ND
NOV 06, 1975	<2	--	ND	--	ND	--	ND	--	40	<2
OCT 29, 1976	<2	--	<20	--	ND	--	<20	--	80	2
NOV 01, 1977	ND	--	ND	--	ND	--	4	--	110	6
OCT 25, 1978	ND	--	ND	--	<2	--	2	--	40	<2
NOV 06, 1979	--	10	--	--	--	10	--	--	--	--
NOV 17, 1980	2	--	.00	--	0	--	1	--	60	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
JUN , 1970	--	--	--	--	--	--	--	--	10	.25
OCT 02...	--	--	--	--	--	--	--	--	--	--
OCT 27...	<500	<250	--	<250	--	<200	--	--	--	--
MAY 18, 1971	<50	300	--	<250	--	<20	--	--	14	.50
OCT 12...	--	<250	--	<250	--	<50	--	--	6	.19
OCT 17, 1972	<50	<250	--	<250	--	<20	--	--	5	.11
OCT 17, 1973	--	--	--	--	--	--	--	--	--	--
OCT 08, 1974	--	50	--	--	<2	--	20	--	--	--
OCT 30, 1974	--	--	20	--	3	--	<20	--	--	--
NOV 06, 1975	--	--	30	--	3	--	<20	--	--	--
OCT 29, 1976	--	--	120	--	4	--	ND	--	--	--
NOV 01, 1977	--	--	70	--	ND	--	<20	.00	--	--
OCT 25, 1978	--	--	30	--	3	--	ND	.00	--	--
NOV 06, 1979	--	--	--	--	--	10	--	--	--	--
NOV 17, 1980	--	--	40	--	1	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01480434 - WEST BRANCH BRANDYWINE CREEK AT ROCK RUN, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sup>d</sup>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV 11, 1970	--	84215 <sup>a</sup>	28	129	6.9	11.0	--	1900	--	100
MAY 25, 1971	--	84215	50	160	7.2	18.0	--	5500	390	97
OCT 19, 1971	--	84215	49	155	7.5	12.0	--	12600	80	80
OCT 02, 1972	0915	84215	17	145	7.0	10.5	--	12200	92	740
OCT 10, 1973	1145	1028 <sup>b</sup>	35	180	6.9	17.0	10.2	60000.0	1900	1500
OCT 29, 1974	1000	1028	20	174	6.8	8.0	10.0	--	--	--
OCT 30, 1975	0900	1028	57	180	7.6	11.5	9.6	--	--	--
OCT 19, 1976	1015	1028	37	190	7.3	7.5	12.2	--	--	--
NOV 02, 1977	1530	80010 <sup>c</sup>	24	180	8.5	14.5	11.4	--	--	--
NOV 02, 1978	1630	80010	27	240	6.9	12.0	--	--	--	--
NOV 02, 1979	1245	80010	67	180	7.2	10.0	12.0	--	--	--
NOV 14, 1980	1015	80010	13	210	7.5	6.5	12.4	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV 11, 1970	--	--	13	--	5.5	--	6.5	--	4.5	--
MAY 25, 1971	--	--	12	--	5.7	--	6.1	--	1.8	--
OCT 19, 1971	--	--	13	--	5.7	--	6.6	--	2.4	--
OCT 02, 1972	--	--	15	--	5.6	--	5.4	--	1.9	--
OCT 10, 1973	56	18	--	13	--	5.8	--	8.0	--	2.6
OCT 29, 1974	68	29	--	17	--	6.2	--	6.3	--	2.4
OCT 30, 1975	70	32	--	18	--	6.0	--	5.9	--	2.5
OCT 19, 1976	60	21	--	14	--	6.0	--	6.4	--	2.3
NOV 02, 1977	67	27	--	16	--	6.5	--	6.8	--	2.8
NOV 02, 1978	71	26	--	17	--	6.9	--	6.3	--	2.6
NOV 02, 1979	--	--	--	--	--	--	--	--	--	--
NOV 14, 1980	69	--	--	17	--	6.4	--	6.0	--	2.9

<sup>a</sup>/ Chester County Health Department Laboratory, Pennsylvania.

<sup>b</sup>/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

<sup>c</sup>/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

<sup>d</sup>/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).



## 01480434 - WEST BRANCH BRANDYWINE CREEK ROCK RUN, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
NOV , 1970										
11...	--	--	--	21	12	--	--	--	122	--
MAY , 1971										
25...	--	--	--	22	8.6	--	--	--	57	--
OCT , 1971										
19...	--	--	--	21	13	--	--	--	117	--
OCT , 1972										
02...	--	--	--	29	11	--	--	--	85	--
OCT , 1973										
10...	46	0	38	13	12	.20	12	--	--	89
OCT , 1974										
29...	48	0	39	16	13	.20	14	115	--	99
OCT , 1975										
30...	46	0	38	16	12	.10	14	115	--	97
OCT , 1976										
19...	47	0	39	17	13	.10	17	110	--	99
NOV , 1977										
02...	49	0	40	17	12	.10	14	106	--	99
NOV , 1978										
02...	55	0	45	15	12	.10	13	110	--	100
NOV , 1979										
02...	--	--	32	16	11	.10	13	--	--	--
NOV , 1980										
14...	--	--	--	17	14	.10	14	124	--	--

DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
NOV , 1970									
11...	1.9	.010	--	<.010	<.01	--	--	.040	.040
MAY , 1971									
25...	2.3	<.010	--	.140	.04	--	--	.050	.000
OCT , 1971									
19...	2.8	<.010	--	.010	.58	--	--	.050	.020
OCT , 1972									
02...	2.0	<.000	--	.000	.17	--	--	.030	.000
OCT , 1973									
10...	2.3	--	--	.040	.50	.54	--	.020	.000
OCT , 1974									
29...	2.1	--	--	.030	.38	.41	--	.020	.000
OCT , 1975									
30...	2.7	--	--	.000	.67	.67	--	.040	.020
OCT , 1976									
19...	2.4	.010	2.4	.150	.15	.30	2.7	.080	.060
NOV , 1977									
02...	2.0	.010	2.0	.010	.31	.32	2.3	.040	.010
NOV , 1978									
02...	2.2	.010	2.2	<.000	.28	.28	2.5	.010	.010
NOV , 1979									
02...	--	--	--	.050	.24	.29	--	2.60	--
NOV , 1980									
14...	2.2	--	2.2	.010	.25	.26	2.5	.020	.010

## 01480434 - WEST BRANCH BRANDYWINE CREEK AT ROCK RUN, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1970	--	<100	--	<900	--	<250	--	150	--	--
MAY , 1971	--	<150	--	<200	--	<250	--	450	--	--
OCT , 1971	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	<500	--	--
OCT , 1973	--	--	--	--	--	--	<20	290	--	<2
OCT , 1974	<2	--	--	--	<2	--	<20	--	130	<2
OCT , 1975	<2	--	--	--	--	--	--	--	200	4
OCT , 1976	--	--	<20	--	<2	--	--	--	90	58
NOV , 1977	--	--	--	--	--	--	<2	--	160	2
NOV , 1978	--	--	--	--	--	--	<2	--	140	--
NOV , 1979	--	10	--	--	--	10	--	--	--	--
NOV , 1980	1	--	--	--	1	--	1	--	100	--

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV , 1970	<50	<250	--	<250	--	<20	--	--	8	.60
MAY , 1971	<50	<250	--	<250	--	<20	--	--	0	.02
OCT , 1971	<50	<250	--	<250	--	<50	--	--	3	.39
OCT , 1972	<50	<250	--	<250	--	<20	--	--	6	.28
OCT , 1973	--	50	--	--	--	--	20	--	--	--
OCT , 1974	--	--	30	--	2	--	<20	--	--	--
OCT , 1975	--	--	40	--	2	--	20	--	--	--
OCT , 1976	--	--	40	--	4	--	<20	--	--	--
NOV , 1977	--	--	30	--	--	--	<20	--	--	--
NOV , 1978	--	--	20	--	<2	--	--	--	--	--
NOV , 1979	--	--	--	--	--	10	--	--	--	--
NOV , 1980	--	--	30	--	3	--	--	--	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius;  
 Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter;  
 T/DAY, tons per day; dashes indicate no data.]

01480629 - BUCK RUN AT DOE RUN, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <u>d</u> /	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV , 1971										
08...	--	84215 <sup>a</sup> /	--	155	8.1	6.0	--	9200	340	400
NOV , 1972										
27...	--	84215	--	160	7.4	7.0	--	116000.0	3200	2800
OCT , 1973										
10...	1050	1028 <sup>b</sup> /	--	210	6.7	16.5	10.2	21000	580	200
OCT , 1974										
29...	1035	1028	--	197	6.9	9.5	11.2	--	--	--
NOV , 1975										
11...	1430	1028	--	190	7.6	12.0	12.1	--	--	--
OCT , 1976										
28...	1345	1028	--	180	7.0	7.0	12.3	--	--	--
NOV , 1977										
02...	1430	80010 <sup>c</sup> /	--	220	7.4	14.5	10.8	--	--	--
OCT , 1978										
26...	1630	80010	--	250	6.9	11.0	11.0	--	--	--
NOV , 1979										
07...	1000	80010	--	176	6.5	9.0	12.0	--	--	--
NOV , 1980										
13...	1030	80010	--	205	6.8	5.0	13.1	--	--	--

DATE	HARD- NESS (MG/L AS CaCO <sub>3</sub> )	HARD- NESS, NONCAR- BONATE (MG/L CaCO <sub>3</sub> )	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV , 1971										
08...	--	--	14	--	6.0	--	7.1	--	2.2	--
NOV , 1972										
27...	--	--	16	--	5.6	--	7.2	--	2.8	--
OCT , 1973										
10...	68	33	--	17	--	6.3	--	9.0	--	2.6
OCT , 1974										
29...	68	31	--	17	--	6.2	--	8.1	--	2.0
NOV , 1975										
11...	67	33	--	16	--	6.5	--	7.5	--	3.4
OCT , 1976										
28...	68	34	--	16	--	6.7	--	8.3	--	2.6
NOV , 1977										
02...	75	33	--	19	--	6.8	--	10	--	2.7
OCT , 1978										
26...	70	34	--	18	--	6.2	--	8.1	--	2.3
NOV , 1979										
07...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
13...	72	--	--	19	--	6.0	--	6.6	--	2.5

<sup>a</sup>/ Chester County Health Department Laboratory, Pennsylvania.

<sup>b</sup>/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

<sup>c</sup>/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

<sup>d</sup>/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01480629 - BUCK RUN AT DOE RUN, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
NOV , 1971	--	--	--	8.8	13	--	--	--	62	--
NOV 08 , 1972	--	--	--	23	16	--	--	--	120	--
OCT 27 , 1973	43	0	35	16	16	.30	5.8	--	--	94
OCT 10 , 1974	45	0	37	15	17	.10	8.0	122	--	96
OCT 29 , 1975	42	0	34	14	17	.10	9.2	123	--	95
OCT 11 , 1976	42	0	34	18	17	.10	10	121	--	100
OCT 28 , 1977	53	0	43	18	19	<.10	8.5	131	--	110
OCT 02 , 1978	45	0	37	16	16	.10	8.1	125	--	97
NOV 26 , 1979	--	--	25	17	14	.00	8.1	--	--	--
NOV 07 , 1980	--	--	--	17	18	.10	7.1	124	--	--
NOV 13 ,	--	--	--							

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
NOV , 1971	3.9	.010	--	<.010	.56	--	--	.100	.090
NOV 08 , 1972	3.9	.020	--	.100	.90	--	--	.204	.120
OCT 27 , 1973	4.2	.00	4.2	.040	.57	.61	--	.240	.23
OCT 10 , 1974	3.8	--	--	.080	.63	.71	--	.150	.130
NOV 29 , 1975	3.6	--	--	.020	.84	.86	--	.110	.070
OCT 11 , 1976	3.6	.020	3.6	.210	.29	.50	4.1	.070	.020
NOV 28 , 1977	3.8	.020	3.8	.080	.92	1.0	4.8	.090	.050
OCT 02 , 1978	4.4	.040	4.4	.100	.37	.47	4.9	.090	.070
NOV 26 , 1979	--	--	4.5	.100	.38	.48	5.0	.030	--
NOV 07 , 1980	4.8	.010	4.8	.010	.24	.25	5.1	.110	.090
NOV 13 ,									

## 01480629 - BUCK RUN AT DOE RUN, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1971	--	<100	--	<200	--	<250	--	<150	--	--
NOV , 1972	--	<100	--	<200	--	<250	--	710	--	--
OCT , 1973	ND	--	ND	--	ND	--	20	--	120	<2
OCT , 1974	ND	--	ND	--	ND	--	ND	--	140	<2
NOV , 1975	<2	--	ND	--	<2	--	ND	--	160	80
OCT , 1976	<2	--	<20	--	ND	--	ND	--	90	4
NOV , 1977	<2	--	ND	--	ND	--	3	--	130	5
OCT , 1978	<2	--	ND	--	3	--	2	--	150	7
NOV , 1979	--	10	--	--	--	0	--	--	--	--
NOV , 1980	1	--	.00	--	1	--	2	--	110	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV , 1971	<50	<250	--	<250	--	<50	--	--	--	--
NOV , 1972	<50	<250	--	<250	--	<20	--	--	--	--
OCT , 1973	--	--	40	--	6	--	20	--	--	--
OCT , 1974	--	--	60	--	2	--	<20	--	--	--
NOV , 1975	--	--	50	--	2	--	30	--	--	--
OCT , 1976	--	--	50	--	6	--	<20	--	--	--
NOV , 1977	--	--	100	--	ND	--	<20	.00	--	--
OCT , 1978	--	--	60	--	ND	--	ND	.10	--	--
NOV , 1979	--	--	--	--	--	10	--	--	--	--
NOV , 1980	--	--	40	--	0	--	3	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS, per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01480632 - DOE RUN AT SPRINGDELL, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sup>d</sup>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV 08, 1971	--	84215 <sup>a</sup> /	--	105	7.9	6.0	--	4800	110	180
NOV 27, 1972	--	84215	--	120	7.3	7.0	--	63000	1200	820
OCT 10, 1973	1030	1028 <sup>b</sup> /	--	140	6.9	16.5	--	35000	1700	540
OCT 29, 1974	1100	1028	--	121	6.9	11.0	10.8	--	--	--
NOV 11, 1975	1330	1028	--	140	7.5	13.0	11.2	--	--	--
OCT 28, 1976	1415	1028	--	145	6.9	8.0	12.2	--	--	--
NOV 02, 1977	1330	80010 <sup>c</sup> /	--	160	7.6	15.5	11.0	--	--	--
OCT 26, 1978	1545	80010	--	175	6.9	11.0	11.2	--	--	--
NOV 07, 1979	1045	80010	--	127	6.1	9.0	11.9	--	--	--
NOV 13, 1980	0900	80010	--	130	6.7	4.5	11.8	--	--	--

DATE	HARD- NESS (MG/L AS CaCO <sub>3</sub> )	HARD- NESS, NONCAR- BONATE (MG/L CaCO <sub>3</sub> )	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV 08, 1971	--	--	8.6	--	4.1	--	4.5	--	1.8	--
NOV 27, 1972	--	--	11	--	4.1	--	4.0	--	2.4	--
OCT 10, 1973	43	20	--	10	--	4.4	--	4.8	--	1.9
OCT 29, 1974	42	21	--	10	--	4.2	--	4.2	--	1.6
NOV 11, 1975	50	25	--	12	--	4.8	--	4.4	--	4.0
OCT 28, 1976	48	18	--	11	--	5.0	--	4.6	--	2.2
NOV 02, 1977	43	19	--	10	--	4.4	--	5.1	--	2.4
OCT 26, 1978	46	25	--	11	--	4.5	--	4.8	--	2.0
NOV 07, 1979	--	--	--	--	--	--	--	--	--	--
NOV 13, 1980	44	--	--	11	--	4.1	--	3.6	--	1.9

<sup>a</sup>/ Chester County Health Department Laboratory, Pennsylvania.

<sup>b</sup>/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

<sup>c</sup>/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

<sup>d</sup>/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

## 01480632 - DOE RUN AT SPRINGDELL, PA

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
NOV , 1971	--	--	--	8.2	8.8	--	--	--	35	--
NOV , 1972	--	--	--	18	8.9	--	--	--	86	--
OCT , 1973	28	0	23	6.8	9.7	.30	7.2	--	--	59
OCT , 1974	25	0	21	6.1	10	.20	8.5	88	--	57
NOV , 1975	30	0	25	9.9	11	.10	9.1	89	--	70
OCT , 1976	37	0	30	11	11	.10	11	83	--	74
NOV , 1977	29	0	24	7.6	10	<.10	8.8	80	--	63
OCT , 1978	26	0	21	7.7	10	<.10	8.9	88	--	62
NOV , 1979	--	--	16	11	10	.00	9.2	--	--	--
NOV , 1980	--	--	--	13	12	.10	9.6	95	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
NOV , 1971	3.4	<.010	--	<.010	.25	--	--	<.010	<.010
NOV , 1972	4.3	<.010	--	<.010	.47	--	--	.070	.030
OCT , 1973	3.4	--	--	.030	.58	.61	--	.020	.000
OCT , 1974	3.2	--	--	.010	.41	.42	--	.010	.010
NOV , 1975	4.1	--	--	.030	.82	.85	--	.080	.020
OCT , 1976	3.7	.010	3.7	.060	.24	.30	4.0	.050	.030
NOV , 1977	3.4	.010	3.4	<.010	.27	.27	3.7	.040	<.010
OCT , 1978	4.2	.010	4.2	.080	.32	.40	4.6	.040	.040
NOV , 1979	--	--	4.4	.040	.01	.05	4.5	.020	--
NOV , 1980	3.7	.000	3.7	.000	.30	.30	4.0	.010	.010

## 01480632 - DOE RUN AT SPRINGDELL, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1971	--	<100	--	<200	--	<250	--	<150	--	--
NOV , 1972	--	<100	--	<200	--	<250	--	520	--	--
OCT , 1973	ND	--	<20	--	ND	--	ND	--	40	<2
OCT , 1974	ND	--	ND	--	ND	--	<20	--	60	<2
NOV , 1975	2	--	ND	--	<2	--	ND	--	110	4
OCT , 1976	<2	--	<20	--	ND	--	ND	--	30	2
NOV , 1977	ND	--	ND	--	ND	--	<2	--	40	3
OCT , 1978	ND	--	ND	--	<2	--	2	--	140	3
NOV , 1979	--	10	--	--	--	0	--	--	--	--
NOV , 1980	1	--	1	--	0	--	1	--	40	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV , 1971	<50	<250	--	<250	--	<50	--	--	--	--
NOV , 1972	<50	<250	--	<250	--	<50	--	--	--	--
OCT , 1973	--	--	20	--	2	--	<20	--	--	--
OCT , 1974	--	--	<10	--	ND	--	<20	--	--	--
NOV , 1975	--	--	<10	--	6	--	<20	--	--	--
OCT , 1976	--	--	60	--	ND	--	<20	--	--	--
NOV , 1977	--	--	20	--	ND	--	<20	.00	--	--
OCT , 1978	--	--	40	--	3	--	ND	.00	--	--
NOV , 1979	--	--	--	--	--	10	--	--	--	--
NOV , 1980	--	--	20	--	0	--	3	.00	--	--



TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01480640 - WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA <sup>a/</sup>

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sup>e/</sup>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV , 1970										
11...	--	84215 <sup>b/</sup>	120	155	7.6	13.0	--	2000	--	30
MAY , 1971										
25...	--	84215	110	180	7.2	19.0	--	6800	620	150
OCT , 1971										
19...	--	84215	280	175	7.8	14.0	--	48000	300	120
OCT , 1972										
02...	1030	84215	65	184	6.6	13.0	--	14300	250	350
OCT , 1973										
10...	0930	1028 <sup>c/</sup>	--	230	6.9	16.5	9.0	26300	720	240
OCT , 1974										
29...	1130	1028	--	201	7.0	11.0	9.9	--	--	--
OCT , 1975										
30...	0940	1028	--	200	7.5	13.0	9.8	--	--	--
OCT , 1976										
19...	1130	1028	--	260	7.3	9.5	11.8	--	--	--
OCT , 1977										
27...	1430	80010 <sup>d/</sup>	--	230	7.3	17.0	9.8	--	--	--
NOV , 1978										
03...	1200	80010	--	380	7.5	10.5	12.0	--	--	--
NOV , 1979										
02...	1400	80010	--	190	7.0	14.0	11.9	--	--	--
NOV , 1980										
12...	1400	80010	--	280	7.4	6.5	13.0	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV , 1970										
11...	--	--	17	--	6.5	--	9.4	--	4.1	--
MAY , 1971										
25...	--	--	15	--	6.4	--	8.6	--	2.2	--
OCT , 1971										
19...	--	--	15	--	6.2	--	8.0	--	2.7	--
OCT , 1972										
02...	--	--	18	--	6.3	--	9.0	--	2.5	--
OCT , 1973										
10...	72	25	--	17	--	7.2	--	11	--	3.0
OCT , 1974										
29...	79	33	--	20	--	7.0	--	11	--	3.2
OCT , 1975										
30...	67	26	--	16	--	6.6	--	7.8	--	2.9
OCT , 1976										
19...	74	30	--	18	--	7.0	--	9.3	--	3.3
OCT , 1977										
27...	80	27	--	20	--	7.3	--	10	--	3.8
NOV , 1978										
03...	83	37	--	21	--	7.5	--	9.9	--	3.0
NOV , 1979										
02...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
12...	83	--	--	21	--	7.3	--	9.6	--	3.6

<sup>a/</sup> Additional data are available from 1945 to 1978.

<sup>b/</sup> Chester County Health Department Laboratory, Pennsylvania.

<sup>c/</sup> U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

<sup>d/</sup> U.S. Geological Survey Central Laboratory Atlanta, Georgia.

<sup>e/</sup> Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25 Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

01480640 - WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE DIS- SOLVED (MG/L AS CL)	FLUORIDE DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG C, DIS- SOLVED (MG/L)
NOV , 1970	--	--	--	19	15	--	--	--	132
MAY , 1971	--	--	--	22	11	--	--	--	93
OCT , 1971	--	--	--	22	13	--	--	--	115
OCT , 1972	--	--	--	34	15	--	--	--	118
OCT , 1973	57	0	47	18	15	.40	9.3	--	--
OCT , 1974	56	0	46	21	19	.30	8.5	135	--
OCT , 1975	50	0	41	19	14	.20	10	124	-
OCT , 1976	54	0	44	20	16	.20	12	122	--
OCT , 1977	64	0	53	21	17	.20	10	129	--
NOV , 1978	56	0	46	20	17	.10	9.4	129	--
NOV , 1979	--	--	38	18	13	.20	9.7	--	--
NOV , 1980	--	--	--	24	24	.30	9.4	149	--

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
NOV , 1970	--	2.5	.030	--	<.010	<.01	--	--	.010	.212
MAY , 1971	--	3.4	.033	--	.030	<.01	--	--	.203	.105
OCT , 1971	--	3.9	.030	--	.010	.44	--	--	.200	.134
OCT , 1972	--	3.5	.040	--	.040	.19	--	--	.290	.260
OCT , 1973	110	3.6	--	--	.050	.82	.87	--	.250	.250
OCT , 1974	120	2.9	--	--	.010	.52	.53	--	.190	.170
OCT , 1975	100	3.2	--	--	<.010	.70	.70	--	.140	.090
OCT , 1976	110	2.9	.020	2.9	.050	.23	.28	3.2	.100	.100
OCT , 1977	120	2.8	.030	2.8	.020	.36	.38	3.2	.150	.110
NOV , 1978	120	2.9	.030	2.9	.030	.35	.38	3.3	.170	.150
NOV , 1979	--	--	--	--	.030	.14	.17	--	2.10	--
NOV , 1980	--	3.1	.020	3.1	.000	.36	.36	3.5	.200	.170

## 01480640 - WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1970	--	<100	--	<900	--	<250	--	230	--	--
MAY , 1971	--	<150	--	<200	--	<250	--	250	--	--
OCT , 1971	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	<500	--	--
OCT , 1973	ND	--	ND	--	3	--	<20	390	--	<2
OCT , 1974	ND	--	ND	--	ND	--	ND	--	100	<2
OCT , 1975	2	--	ND	--	<2	--	ND	--	80	22
OCT , 1976	ND	--	<20	--	<2	--	ND	--	80	70
OCT , 1977	ND	--	<2	--	ND	--	4	--	170	6
NOV , 1978	ND	--	ND	--	ND	--	3	--	130	<2
NOV , 1979	--	10	--	--	--	10	--	--	--	--
NOV , 1980	1	--	.00	--	0	--	4	--	100	2

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV , 1970	<50	<250	--	<250	--	<20	--	--	10	3.2
MAY , 1971	<50	<250	--	<250	--	<20	--	--	18	5.3
OCT , 1971	<50	<250	--	<250	--	<50	--	--	3	2.3
OCT , 1972	<50	<250	--	<250	--	<20	--	--	5	.88
OCT , 1973	--	60	--	--	24	--	20	--	--	--
OCT , 1974	--	--	30	--	17	--	90	--	--	--
OCT , 1975	--	--	60	--	10	--	<20	--	--	--
OCT , 1976	--	--	30	--	11	--	<20	--	--	--
OCT , 1977	--	--	70	--	10	--	ND	.10	--	--
NOV , 1978	--	--	30	--	5	--	ND	.00	--	--
NOV , 1979	--	--	--	--	--	10	--	--	--	--
NOV , 1980	--	--	40	--	11	--	3	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01480647 - EAST BRANCH BRANDYWINE CREEK NEAR STRUBLE DAM, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sub>d</sub>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	FORM, TOTAL, IMMED. (COLS. PER 100 ML)	FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
OCT , 1971	--	84215a/	--	195	6.8	16.0	--	182000	26000	39700
OCT , 1972										
31...	0730	84215	--	155	7.2	8.0	--	1300	420	320
OCT , 1973										
11...	0915	1028b/	--	200	6.4	10.5	9.0	69000	5300	660
OCT , 1974										
25...	1340	1028	--	192	7.3	10.5	8.1	--	--	--
OCT , 1975										
29...	1545	1028	--	200	7.4	16.0	9.0	--	--	--
OCT , 1976										
19...	0830	1028	--	200	6.9	8.5	11.0	--	--	--
OCT , 1977										
25...	1030	80010c/	--	180	6.8	13.0	11.9	--	--	--
NOV , 1978										
02...	1330	80010	--	240	7.2	14.0	12.8	--	--	--
NOV , 1979										
08...	0830	80010	--	158	6.8	7.5	10.6	--	--	--
NOV , 1980										
07...	1000	80010	--	180	7.2	9.0	11.6	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT , 1971	--	--	14	--	6.8	--	5.6	--	6.6	--
OCT , 1972	--	--	17	--	6.5	--	5.2	--	3.5	--
OCT , 1973										
11...	70	25	--	17	--	6.8	--	6.5	--	3.5
OCT , 1974										
25...	70	36	--	18	--	6.2	--	7.2	--	1.8
OCT , 1975										
29...	65	23	--	16	--	6.0	--	5.4	--	4.3
OCT , 1976										
19...	63	25	--	15	--	6.2	--	5.8	--	3.4
OCT , 1977										
25...	66	17	--	16	--	6.3	--	6.3	--	3.5
NOV , 1978										
02...	64	23	--	16	--	5.9	--	6.2	--	3.1
NOV , 1979										
08...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
07...	67	--	--	16	--	6.5	--	6.4	--	3.1

a/ Chester County Health Department Laboratory, Pennsylvania.

b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

## 01480647 - EAST BRANCH BRANDYWINE CREEK NEAR STRUBLE DAM, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
OCT 25, 1971	--	--	--	24	11	--	--	--	126	--
OCT 31, 1972	--	--	--	13	11	--	--	--	108	--
OCT 11, 1973	56	0	46	11	11	.20	11	--	--	95
OCT 25, 1974	43	0	35	12	13	.10	20	134	--	100
OCT 29, 1975	51	0	42	13	11	.20	11	130	--	93
OCT 19, 1976	46	0	38	11	11	.10	14	146	--	89
OCT 25, 1977	60	0	49	12	11	.10	7.5	112	--	92
NOV 02, 1978	50	0	41	11	12	.10	12	110	--	91
NOV 08, 1979	--	--	35	14	11	.10	9.0	--	--	--
NOV 07, 1980	--	--	--	12	13	.20	14	124	--	--

DATE	NITRO- GEN ITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
OCT 25, 1971	1.8	.030	--	.030	3.1	--	--	.190	.030
OCT 31, 1972	1.9	.030	--	.020	.68	--	--	.050	.010
OCT 11, 1973	2.7	--	--	.150	1.2	1.3	--	.040	.010
OCT 25, 1974	.63	--	--	.050	.53	.58	--	.070	.040
OCT 29, 1975	2.7	--	--	.180	1.2	1.4	--	.060	.010
OCT 19, 1976	2.7	.030	2.7	.130	.55	.68	3.4	.100	.020
OCT 25, 1977	2.2	.010	2.2	.060	.59	.65	2.9	.040	<.010
NOV 02, 1978	2.5	.010	2.5	.300	.64	.94	3.4	.010	<.010
NOV 08, 1979	--	--	--	.100	.78	.88	--	.040	--
NOV 07, 1980	2.4	.020	2.4	.300	.50	.80	3.2	.070	.030

## 01480647 - EAST BRANCH BRANDYWINE CREEK NEAR STRUBLE DAM, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT , 1971	--	<100	--	<200	--	<250	--	1300	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	1200	--	--
OCT , 1973	ND	--	ND	--	ND	--	ND	--	200	<2
OCT , 1974	ND	--	ND	--	ND	--	ND	--	70	<2
OCT , 1975	16	--	ND	--	ND	--	ND	--	600	90
OCT , 1976	<2	--	<20	--	2	--	<20	--	60	110
OCT , 1977	<2	--	ND	--	ND	--	<2	--	70	9
NOV , 1978	ND	--	ND	--	ND	--	3	--	90	<2
NOV , 1979	--	10	--	--	--	0	--	--	--	--
NOV , 1980	0	--	1	--	1	--	1	--	370	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT , 1971	<50	<250	--	<250	--	<50	--	--	--	--
OCT , 1972	<50	<250	--	<250	--	<20	--	--	--	--
OCT , 1973	--	--	200	--	ND	--	<20	--	--	--
OCT , 1974	--	--	100	--	2	--	20	--	--	--
OCT , 1975	--	--	410	--	3	--	30	--	--	--
OCT , 1976	--	--	90	--	10	--	30	--	--	--
OCT , 1977	--	--	80	--	<2	--	<20	.00	--	--
NOV , 1978	--	--	70	--	2	--	ND	.00	--	--
NOV , 1979	--	--	--	--	--	10	--	--	--	--
NOV , 1980	--	--	160	--	0	--	3	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

01480648 - EAST BRANCH BRANDYWINE CREEK NEAR CUPOLA, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <u>d</u>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV , 1971	--									
OCT , 1972		84215 <u>a</u> /	--	130	8.0	6.0	--	6400	260	2500
OCT , 1973	0630	84215	--	145	7.2	7.0	--	2200	440	490
OCT , 1974	1000	1028 <u>b</u> /	--	185	6.5	16.5	9.4	28000	1900	940
OCT , 1975	1405	1028	--	161	--	9.5	--	--	--	--
OCT , 1976	0815	1028	--	160	7.5	11.5	9.5	--	--	--
OCT , 1977	0920	1028	--	165	7.2	7.0	11.0	--	--	--
OCT , 1978	0930	80010 <u>c</u> /	--	180	6.9	11.5	11.0	--	--	--
NOV , 1979	1245	80010	--	240	7.2	11.0	18.0	--	--	--
NOV , 1980	1600	80010	--	160	6.5	10.0	11.0	--	--	--
NOV , 1980	1115	80010	--	210	7.2	9.0	11.6	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV , 1971	--	--	13	--	5.1	--	7.4	--	2.3	--
OCT , 1972	--	--	17	--	6.0	--	5.4	--	3.3	--
OCT , 1973										
OCT , 1974	65	20	--	16	--	6.0	--	7.0	--	2.9
OCT , 1975	63	25	--	17	--	5.1	--	7.1	--	1.7
OCT , 1976	62	19	--	16	--	5.3	--	5.4	--	3.3
OCT , 1977	60	21	--	15	--	5.4	--	6.0	--	3.0
OCT , 1978	70	16	--	18	--	6.0	--	6.8	--	3.0
NOV , 1979	140	61	--	31	--	16	--	10	--	2.6
NOV , 1980	--	--	--	--	--	--	--	--	--	--
NOV , 1980	64	--	--	16	--	5.9	--	6.9	--	2.7

a/ Chester County Health Department Laboratory, Pennsylvania.

b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

## 01480648 - EAST BRANCH BRANDYWINE CREEK NEAR CUPOLA, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
NOV , 1971	--	--	--	15	13	--	--	--	80	--
OCT 08... 1972	--	--	--	9.1	10	--	--	--	111	--
OCT 31... 1973	55	0	45	10	9.9	.40	15	--	--	94
OCT 11... 1974	48	0	39	9.3	9.2	.20	24	129	--	97
OCT 25... 1975	52	0	43	12	10	.20	15	115	--	93
OCT 30... 1976	47	0	39	9.8	9.9	.10	18	106	--	91
OCT 19... 1977	66	0	54	12	9.9	.10	14	109	--	100
NOV 25... 1978	100	0	82	40	21	.10	5.3	208	--	180
NOV 02... 1979	--	--	37	13	9.1	.10	13	--	--	--
NOV 07... 1980	--	--	--	11	11	.10	18	127	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
NOV , 1971	3.0	.010	--	<.010	.98	--	--	.040	.010
OCT 08... 1972	2.4	.020	--	<.010	.66	--	--	.050	.020
OCT 31... 1973	3.0	.000	3.0	.070	.87	.94	--	.040	.010
OCT 11... 1974	3.4	--	--	.030	.54	.57	--	.040	.020
OCT 25... 1975	2.8	--	--	.080	1.2	1.3	--	.060	.010
OCT 30... 1976	2.7	.020	2.7	.140	.39	.53	3.2	.060	.030
OCT 19... 1977	2.4	.010	2.4	.050	.38	.43	2.8	.990	.960
NOV 25... 1978	4.0	.030	4.0	.070	.33	.40	4.4	.090	.080
NOV 02... 1979	--	--	2.5	.060	.73	.79	3.3	.380	--
NOV 07... 1980	2.7	.020	2.7	.130	.41	.54	3.2	.040	.020



## 01480648 - EAST BRANCH BRANDYWINE CREEK NEAR CUPOLA, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1971	--	<100	--	<200	--	<250	--	700	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	950	--	--
OCT , 1973	ND	--	<20	--	ND	--	ND	--	130	<2
OCT , 1974	ND	--	ND	--	ND	--	ND	--	50	<2
OCT , 1975	<2	--	ND	--	ND	--	ND	--	430	3
OCT , 1976	<2	--	<20	--	2	--	ND	--	60	53
OCT , 1977	ND	--	ND	--	ND	--	ND	--	70	3
NOV , 1978	ND	--	ND	--	ND	--	3	--	60	2
NOV , 1979	--	<10	--	--	--	0	--	--	--	--
NOV , 1980	1	--	.00	--	1	--	0	--	270	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV , 1971	<50	<250	--	<250	--	<50	--	--	--	--
OCT , 1972	<50	<250	--	<250	--	<20	--	--	--	--
OCT , 1973	--	--	90	--	<2	--	<20	--	--	--
OCT , 1974	--	--	70	--	4	--	<20	--	--	--
OCT , 1975	--	--	180	--	2	--	<20	--	--	--
OCT , 1976	--	--	70	--	<2	--	20	--	--	--
OCT , 1977	--	--	60	--	<2	--	ND	.00	--	--
NOV , 1978	--	--	40	--	3	--	ND	.00	--	--
NOV , 1979	--	--	--	--	--	10	--	--	--	--
NOV , 1980	--	--	90	--	0	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01480653 - EAST BRANCH BRANDYWINE CREEK AT GLENMOORE, PA a/

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <u>e/</u>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
OCT 25, 1971	--	84215 <u>b/</u>	--	160	7.4	15.5	--	146000	11000	26500
OCT 31, 1972	0930	84215	--	158	7.4	7.0	--	950	230	280
OCT 11, 1973	0840	1028 <u>c/</u>	--	165	7.0	14.0	9.0	24000	400	210
OCT 25, 1974	1300	1028	--	156	7.8	9.0	9.5	--	--	--
OCT 29, 1975	1445	1028	--	200	7.5	14.5	11.6	--	--	--
OCT 20, 1976	1430	1028	--	180	7.4	10.0	11.8	--	--	--
OCT 25, 1977	1130	80010 <u>d/</u>	--	160	7.1	12.0	11.5	--	--	--
NOV 02, 1978	1015	80010	--	200	7.0	8.5	11.8	--	--	--
NOV 08, 1979	1000	80010	--	146	6.6	6.5	11.6	--	--	--
NOV 14, 1980	1330	80010	--	210	7.1	7.0	13.1	--	--	--

DATE	HARD- NESS (MG/L AS CaCO3)	HARD- NESS NONCAR- BONATE (MG/L CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 25, 1971	--	--	13	--	5.1	--	5.9	--	5.0	--
OCT 31, 1972	--	--	18	--	7.3	--	6.6	--	2.8	--
OCT 11, 1973	56	14	--	14	--	5.1	--	7.0	--	2.3
OCT 25, 1974	58	15	--	15	--	5.0	--	6.6	--	1.4
OCT 29, 1975	71	33	--	18	--	6.4	--	6.1	--	2.6
OCT 20, 1976	51	12	--	13	--	4.5	--	6.6	--	2.9
OCT 25, 1977	56	22	--	14	--	5.2	--	7.0	--	2.3
NOV 02, 1978	44	4	--	11	--	4.1	--	7.4	--	2.3
NOV 08, 1979	--	--	--	--	--	--	--	--	--	--
NOV 14, 1980	58	--	--	15	--	4.9	--	6.6	--	2.2

a/ Additional data are available from 1966 to 1969.

b/ Chester County Health Department Laboratory, Pennsylvania.

c/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

d/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

e/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

01480653 - EAST BRANCH BRANDYWINE CREEK AT GLENMOORE, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
OCT , 1971	--	--	--	27	9.1	--	--	--	120	--
OCT 25... 1972	--	--	--	20	11	--	--	--	122	--
OCT 31... 1973	51	0	42	10	8.8	.30	16	--	--	89
OCT 11... 1974	52	0	43	10	8.7	.20	19	106	--	92
OCT 25... 1975	46	0	38	25	10	.20	17	129	--	110
OCT 29... 1976	48	0	39	13	11	.10	19	100	--	94
OCT 20... 1977	42	0	34	12	9.5	.10	14	107	--	85
NOV 02... 1978	49	0	40	10	9.8	.10	18	110	--	87
NOV 08... 1979	--	--	30	13	9.3	.10	15	--	--	--
NOV 14... 1980	--	--	--	12	11	.10	19	119	--	--

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL, (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL, (MG/L AS P)
OCT , 1971	1.1	<.010	--	<.010	1.1	--	--	.160	.040
OCT 25... 1972	2.1	<.010	--	.080	.34	--	--	.030	.020
OCT 31... 1973	2.2	--	--	.080	.59	.67	--	.030	.010
OCT 11... 1974	2.7	--	--	.020	.61	.63	--	.020	.010
OCT 25... 1975	3.2	--	--	.180	.82	1.0	--	.050	.010
OCT 29... 1976	2.4	.010	2.4	.070	.31	.38	2.8	.350	.300
OCT 20... 1977	2.0	.010	2.0	.010	.29	.30	2.3	.020	.010
NOV 02... 1978	2.5	.010	2.5	.060	.45	.51	3.0	.020	.010
NOV 08... 1979	--	--	2.8	.030	.29	.32	3.1	2.50	--
NOV 14... 1980	2.5	.000	2.5	.010	.40	.41	2.9	.030	.030

## 01480653 - EAST BRANCH BRANDYWINE CREEK AT GLENMOORE, PA--Continued

DATE	CADMIUM TOTAL DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT , 1971	--	<100	--	<200	--	<250	--	750	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	420	--	--
OCT , 1973	ND	--	ND	--	ND	--	ND	--	140	<2
OCT , 1974	<2	--	ND	--	ND	--	ND	--	70	<2
OCT , 1975	<2	--	ND	--	ND	--	ND	--	180	4
OCT , 1976	<2	--	<20	--	<2	--	ND	--	100	15
OCT , 1977	<2	--	ND	--	ND	--	<2	--	110	11
NOV , 1978	ND	--	ND	--	ND	--	3	--	90	<2
NOV , 1979	--	<10	--	--	--	10	--	--	--	--
NOV , 1980	1	--	.00	--	1	--	1	--	80	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT , 1971	<50	<250	--	<250	--	<20	--	--	--	--
OCT , 1972	<50	<250	--	<250	--	<20	--	--	--	--
OCT , 1973	--	--	<10	--	ND	--	ND	--	--	--
OCT , 1974	--	--	20	--	3	--	20	--	--	--
OCT , 1975	--	--	40	--	2	--	150	--	--	--
OCT , 1976	--	--	50	--	2	--	20	--	--	--
OCT , 1977	--	--	30	--	2	--	<20	.00	--	--
NOV , 1978	--	--	20	--	ND	--	ND	.00	--	--
NOV , 1979	--	--	--	--	--	0	--	--	--	--
NOV , 1980	--	--	40	--	1	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01480656 - INDIAN RUN NEAR SPRINGTON, PA a/

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <u>a/</u>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV , 1971	--	84215b/	--	100	8.1	7.0	--	3100	56	120
OCT ., 1972	0845	84215	--	125	7.5	6.5	--	200	20	67
OCT ., 1973	0800	1028c/	--	160	6.8	12.5	10.0	7700	80	140
OCT ., 1974	1500	1028	--	80	7.7	9.5	9.8	--	--	--
NOV ., 1975	1330	1028	--	140	7.3	15.5	10.1	--	--	--
OCT ., 1976	1515	1028	--	170	7.3	10.5	11.6	--	--	--
OCT ., 1977	1230	80010d/	--	165	7.1	11.5	11.6	--	--	--
NOV ., 1978	1130	80010	--	220	7.1	8.5	13.0	--	--	--
NOV ., 1979	1045	80010	--	135	6.8	7.0	12.6	--	--	--
NOV ., 1980	1315	80010	--	210	6.9	9.0	10.8	--	--	--

DATE AS K)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV , 1971	--	--	11	--	2.8	--	5.5	--	1.3	--
OCT ., 1972	--	--	15	--	4.0	--	6.6	--	1.6	--
OCT ., 1973	54	12	--	15	--	4.0	--	7.5	--	1.6
OCT ., 1974	56	9	--	16	--	4.0	--	7.1	--	1.0
NOV ., 1975	47	9	--	14	--	3.0	--	6.0	--	1.7
OCT ., 1976	51	12	--	14	--	3.8	--	6.6	--	2.0
OCT ., 1977	54	17	--	15	--	4.1	--	8.8	--	1.7
NOV ., 1978	60	17	--	17	--	4.2	--	9.7	--	1.8
NOV ., 1979	--	--	--	--	--	--	--	--	--	--
NOV ., 1980	58	--	--	16	--	4.3	--	9.1	--	1.4

a/ Additional data are available from 1967 to 1969.

b/ Chester County Health Department Laboratory, Pennsylvania.

c/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

d/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

e/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

## 01480656 - INDIAN RUN NEAR SPRINGTON, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINIT FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
NOV , 1971	--	--	--	11	8.8	--	--	--	59	--
OCT , 1972	--	--	--	9.6	9.7	--	--	--	107	--
OCT , 1973	57	0	47	7.4	8.1	.30	22	--	--	91
OCT , 1974	58	0	48	7.9	7.3	.20	25	130	--	97
NOV , 1975	46	0	38	7.3	7.4	.20	19	106	--	81
OCT , 1976	47	0	39	6.4	7.5	.10	25	114	--	89
OCT , 1977	45	--	37	8.9	8.6	<.10	26	122	--	95
NOV , 1978	52	0	43	6.8	13	.10	26	117	--	100
NOV , 1979	--	--	32	7.7	7.9	.10	23	--	--	--
NOV , 1980	--	--	--	9.1	10	.10	29	125	--	--

DATE	NITRO- GEN ITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
NOV , 1971	1.6	<.010	--	<.010	.92	--	--	<.010	<.010
OCT , 1972	1.9	<.010	--	<.010	.14	--	--	.020	.010
OCT , 1973	2.9	.010	2.9	.030	.48	.51	--	.020	.010
OCT , 1974	2.7	--	--	.010	.46	.47	--	.040	.030
NOV , 1975	2.7	--	--	.030	.90	.93	--	.110	.050
OCT , 1976	2.4	.010	2.4	.060	.32	.38	2.8	.190	.040
OCT , 1977	2.9	.010	2.9	.030	.43	.46	3.4	.130	.080
NOV , 1978	2.8	.010	2.8	.100	.33	.43	3.2	.120	.110
NOV , 1979	--	--	2.5	.000	.20	.20	2.7	.050	--
NOV , 1980	3.0	.000	3.0	.000	.08	.08	3.1	.170	.160

## 01480656 - INDIAN RUN NEAR SPRINGTON, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1971	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	190	--	--
OCT , 1973	ND	--	<20	--	ND	--	ND	--	50	<2
OCT , 1974	ND	--	ND	--	ND	--	ND	--	40	<2
NOV , 1975	3	--	ND	--	<2	--	ND	--	150	10
OCT , 1976	<2	--	<20	--	<2	--	<20	--	100	8
OCT , 1977	ND	--	ND	--	ND	--	<2	--	50	5
NOV , 1978	ND	--	ND	--	<2	--	2	--	60	2
NOV , 1979	--	20	--	--	--	0	--	--	--	--
NOV , 1980	0	--	1	--	1	--	2	--	50	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV , 1971	<50	<250	--	<250	--	<50	--	--	--	--
OCT , 1972	<50	<250	--	<250	--	<20	--	--	--	--
OCT , 1973	--	--	<10	--	<2	--	20	--	--	--
OCT , 1974	--	--	<10	--	3	--	30	--	--	--
NOV , 1975	--	--	30	--	2	--	20	--	--	--
OCT , 1976	--	--	50	--	2	--	20	--	--	--
OCT , 1977	--	--	<10	--	<2	--	ND	.00	--	--
NOV , 1978	--	--	20	--	<2	--	ND	.00	--	--
NOV , 1979	--	--	--	--	--	10	--	--	--	--
NOV , 1980	--	--	7	--	1	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01480700 - EAST BRANCH BRANDYWINE CREEK NEAR DOWNINGTOWN, PA a/

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <u>e/</u>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV , 1970										
MAY 11, 1971		84215 <u>b/</u>	45	100	6.9	11.0	--	22000.0	--	--
OCT 25, 1971	--	84215	64	150	7.0	16.0	--	11000.	1800	240
OCT 19, 1972	--	84215	73	150	7.4	10.0	--	8600	400	120
OCT 02, 1973	--	84215	68	150	6.8	10.5	--	15700	410	1200
OCT 10, 1974	1220	1028 <u>c/</u>	22	180	7.5	17.0	11.0	15300	460	280
OCT 29, 1975	0915	1028	32	90	6.9	9.5	10.8	--	--	--
OCT 29, 1976	1340	1028	77	180	7.8	16.0	10.2	--	--	--
OCT 18, 1977	1630	1028	48	190	7.5	11.5	11.0	--	--	--
OCT 25, 1978	1400	80010 <u>d/</u>	41	175	7.2	14.5	11.1	--	--	--
OCT 30, 1979	1130	80010	31	275	7.4	9.0	12.2	--	--	--
NOV 02, 1979	0930	80010	84	185	6.7	11.0	11.2	--	--	--
NOV 14, 1980	0845	80010	20	200	7.4	7.5	11.8	--	--	--

DATE	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV , 1970										
MAY 11, 1971	--	--	13	--	4.8	--	7.6	--	6.0	--
OCT 25, 1971	--	--	12	--	4.6	--	7.8	--	1.6	--
OCT 19, 1972	--	--	12	--	4.4	--	7.1	--	2.1	--
OCT 02, 1973	--	--	14	--	4.3	--	6.1	--	1.9	--
OCT 10, 1974	56	21	--	14	--	5.1	--	7.5	--	2.2
OCT 29, 1975	56	19	--	14	--	5.0	--	7.5	--	2.0
OCT 29, 1976	60	27	--	16	--	4.8	--	6.6	--	2.3
OCT 18, 1977	51	16	--	14	--	4.0	--	8.0	--	2.5
OCT 25, 1978	56	24	--	14	--	5.1	--	8.4	--	2.6
OCT 30, 1979	67	29	--	17	--	6.0	--	8.2	--	2.6
NOV 02, 1979	--	--	--	--	--	--	--	--	--	--
NOV 14, 1980	64	--	--	17	--	5.2	--	7.2	--	2.3

a/ Additional data are available from 1954 to 1977.  
b/ Chester County Health Department Laboratory, Pennsylvania.  
c/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.  
d/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.  
e/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).



TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01480700 - EAST BRANCH BRANDYWINE CREEK NEAR DOWNINGTOWN, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
NOV , 1970										
11...	--	--	--	18	17	--	--	--	111	--
MAY , 1971										
25...	--	--	--	21	11	--	--	--	92	--
OCT , 1971										
19...	--	--	--	22	12	--	--	--	110	--
OCT , 1972										
02...	--	--	--	30	12	--	--	--	81	--
OCT , 1973										
10...	43	0	35	13	13	.40	15	--	--	91
OCT , 1974										
29...	45	0	37	15	13	.20	13	114	--	92
OCT , 1975										
29...	40	0	33	18	12	.20	13	112	--	93
OCT , 1976										
18...	44	0	36	13	14	.10	15	103	--	92
OCT , 1977										
25...	39	0	32	15	14	.10	12	104	--	91
OCT , 1978										
30...	46	0	38	16	13	.10	15	102	--	100
NOV , 1979										
02...	--	--	26	15	11	.10	13	--	--	--
NOV , 1980										
14...	--	--	--	18	18	.10	15	122	--	--

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
NOV , 1970									
11...	.88	<.010	--	--	--	--	--	.020	.010
MAY , 1971									
25...	2.0	<.010	--	.060	--	--	--	.023	<.010
OCT , 1971									
19...	2.4	<.010	--	.010	.47	--	--	.040	.130
OCT , 1972									
02...	2.1	<.010	--	.060	.31	--	--	.030	.010
OCT , 1973									
10...	1.8	.010	1.8	.020	.49	.51	2.3	.010	<.010
OCT , 1974									
29...	1.4	--	--	.100	.45	.55	--	.020	.010
OCT , 1975									
29...	1.7	--	--	<.010	.63	.63	--	.020	.010
OCT , 1976									
18...	1.3	.010	1.3	.250	.45	.70	2.0	.070	.060
OCT , 1977									
25...	1.2	.010	1.2	.010	.29	.30	1.5	.020	.010
OCT , 1978									
30...	.40	<.010	.40	.090	.22	.31	.71	.010	.010
NOV , 1979									
02...	--	--	--	.030	.48	.51	--	.160	--
NOV , 1980									
14...	1.9	.000	1.9	.020	.31	.33	2.2	.020	.010

## 01480700 - EAST BRANCH BRANDYWINE CREEK NEAR DOWNINGTOWN, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL, RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL, RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL, RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1970										
11... 1970	--	<100	--	<900	--	<250	--	100	--	--
MAY , 1971										
25... 1971	--	<150	--	<200	--	<250	--	230	--	--
OCT , 1972										
19... 1972	--	<100	--	<50	--	<250	--	<150	--	--
OCT , 1973										
02... 1973	--	<100	--	<10	--	<250	--	<500	--	--
OCT , 1974										
10... 1974	<2	--	ND	--	ND	--	ND	140	--	ND
OCT , 1975										
29... 1975	<2	--	ND	--	ND	--	ND	--	330	<2
OCT , 1976										
29... 1976	<2	--	ND	--	ND	--	ND	--	80	5
OCT , 1977										
18... 1977	<2	--	<20	--	2	--	<20	--	50	ND
OCT , 1978										
25... 1978	ND	--	ND	--	ND	--	<2	--	60	4
OCT , 1979										
30... 1979	ND	--	ND	--	ND	--	ND	--	90	3
NOV , 1980										
02... 1980	--	10	--	--	--	10	--	--	--	--
NOV , 1980										
14... 1980	2	--	.00	--	1	--	2	--	110	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL, RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL, RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV , 1970										
11... 1970	<50	<250	--	<250	--	<20	--	--	8	.98
MAY , 1971										
25... 1971	<50	<250	--	<250	--	<20	--	--	3	.52
OCT , 1972										
19... 1972	<50	<250	--	<250	--	<50	--	--	4	.79
OCT , 1973										
02... 1973	<50	<250	--	<250	--	<20	--	--	4	.73
OCT , 1974										
10... 1974	--	20	--	--	ND	--	<20	--	--	--
OCT , 1975										
29... 1975	--	--	140	--	2	--	<20	--	--	--
OCT , 1976										
29... 1976	--	--	<10	--	2	--	<20	--	--	--
OCT , 1977										
18... 1977	--	--	90	--	5	--	20	--	--	--
OCT , 1978										
25... 1978	--	--	60	--	2	--	ND	.00	--	--
OCT , 1979										
30... 1979	--	--	40	--	ND	--	ND	.00	--	--
NOV , 1980										
02... 1980	--	--	--	--	--	10	--	--	--	--
NOV , 1980										
14... 1980	--	--	80	--	4	--	0	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01480903 - VALLEY CREEK AT MULLSTEINS MEADOWS NEAR DOWNINGTOWN, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sup>a</sup>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV , 1971										
08...	--	84215 <sub>s</sub> /	--	235	7.6	6.0	--	3400	150	130
OCT , 1972										
24...	0715	84215	--	298	7.6	12.0	--	1700	180	150
OCT , 1973										
12...	0950	1028 <sub>b</sub> /	--	320	8.0	13.0	11.8	14000	250	76
OCT , 1974										
29...	--	--	--	--	--	--	--	--	--	--
NOV , 1975										
10...	0800	1028	--	300	7.6	15.5	9.2	--	--	--
OCT , 1976										
21...	1230	1028	--	320	7.6	12.0	11.4	--	--	--
OCT , 1977										
26...	0930	80010 <sub>c</sub> /	--	320	7.6	13.0	10.2	--	--	--
NOV , 1978										
02...	1515	80010	--	420	7.7	12.0	13.6	--	--	--
NOV , 1979										
02...	1045	80010	--	306	7.4	10.5	12.8	--	--	--
NOV , 1980										
19...	1300	80010	--	325	7.2	5.5	13.8	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV , 1971										
08...	--	--	25	--	10	--	9.6	--	2.0	--
OCT , 1972										
24...	--	--	32	--	14	--	13	--	2.2	--
OCT , 1973										
12...	130	36	--	29	--	14	--	12	--	2.5
OCT , 1974										
29...	--	--	--	--	--	--	--	--	--	--
NOV , 1975										
10...	130	37	--	31	--	12	--	9.1	--	2.2
OCT , 1976										
21...	99	29	--	25	--	9.0	--	9.8	--	3.8
OCT , 1977										
26...	170	62	--	34	--	21	--	11	--	3.2
NOV , 1978										
02...	64	21	--	17	--	5.3	--	7.2	--	2.7
NOV , 1979										
02...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
19...	110	--	--	27	--	11	--	18	--	2.1

<sup>a</sup>/ Chester County Health Department Laboratory, Pennsylvania.  
<sup>b</sup>/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.  
<sup>c</sup>/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.  
<sup>d</sup>/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01480903 - VALLEY CREEK AT MULLSTEINS MEADOWS NEAR DOWNINGTOWN, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE DIS- SOLVED (MG/L AS CL)	FLUORIDE DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
NOV 08, 1971	--	--	--	16	18	--	--	--	126	--
OCT 24, 1972	--	--	--	34	18	--	--	--	202	--
OCT 12, 1973	110	0	94	25	18	.20	4.6	--	--	160
OCT 29, 1974	--	--	--	--	--	--	--	--	--	--
NOV 10, 1975	110	0	90	24	17	<.10	6.1	173	--	160
OCT 21, 1976	87	0	71	27	19	.10	7.5	146	--	140
OCT 26, 1977	130	0	110	50	19	.10	4.5	204	--	210
NOV 02, 1978	52	0	43	11	11	.10	17	118	--	97
NOV 02, 1979	--	--	91	28	17	.10	6.3	--	--	--
NOV 19, 1980	--	--	--	31	27	.10	7.3	185	--	--

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
NOV 08, 1971	2.8	.020	--	.050	.41	--	--	.121	.124
OCT 24, 1972	3.4	.020	--	<.010	.39	--	--	.390	.320
OCT 12, 1973	2.7	.010	2.7	.030	.58	.61	--	.340	.350
OCT 29, 1974	--	--	--	--	--	--	--	--	--
NOV 10, 1975	2.7	--	--	<.010	.67	.67	--	.090	.070
OCT 21, 1976	1.3	.010	1.3	.010	.57	.58	1.9	.120	.070
OCT 26, 1977	2.9	.060	3.0	.020	.23	.25	3.3	.080	.060
NOV 02, 1978	2.6	.010	2.6	.040	.40	.44	3.0	.020	.010
NOV 02, 1979	--	--	3.5	.040	.44	.48	4.0	.920	--
NOV 19, 1980	2.1	.010	2.1	.010	.21	.22	2.3	.140	.120

## 01480903 - VALLEY CREEK AT MULLSTEINS MEADOWS NEAR DOWNINGTOWN, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1971										
OCT . 08 . 1972	--	<100	--	<200	--	<250	--	<150	--	--
OCT . 24 . 1972	--	<100	--	<200	--	<250	--	300	--	--
OCT . 12 . 1973	ND	--	ND	--	ND	--	ND	--	90	<2
OCT . 29 . 1974	--	--	--	--	--	--	--	--	--	--
NOV . 10 . 1975	ND	--	ND	--	ND	--	ND	--	20	2
OCT . 21 . 1976	ND	--	<20	--	2	--	<20	--	90	3
OCT . 26 . 1977	ND	--	<2	--	ND	--	<2	--	30	5
NOV . 02 . 1978	ND	--	ND	--	ND	--	2	--	70	2
NOV . 02 . 1979	--	20	--	--	--	0	--	--	--	--
NOV . 19 . 1980	1	--	1	--	1	--	3	--	40	3

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV , 1971										
OCT . 08 . 1972	<50	<250	--	<250	--	<50	--	--	--	--
OCT . 24 . 1972	<50	<250	--	<250	--	<20	--	--	--	--
OCT . 12 . 1973	--	--	<10	--	ND	--	ND	--	--	--
OCT . 29 . 1974	--	--	--	--	--	--	--	--	--	--
NOV . 10 . 1975	--	--	20	--	3	--	20	--	--	--
OCT . 21 . 1976	--	--	60	--	4	--	<20	--	--	--
OCT . 26 . 1977	--	--	<10	--	3	--	<20	.00	--	--
NOV . 02 . 1978	--	--	40	--	ND	--	20	.00	--	--
NOV . 02 . 1979	--	--	--	--	--	10	--	--	--	--
NOV . 19 . 1980	--	--	20	--	0	--	1	.10	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

01480950 - EAST BRANCH BRANDYWINE CREEK AT WAWASET, PA <sup>a</sup>/

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sub>e</sub> /	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV , 1970										
11...	--	84215 <sup>b</sup> /	110	200	--	14.0	--	2700	--	300
MAY , 1971										
25...	--	84215	130	195	7.6	19.0	--	2600	200	130
OCT , 1971										
19...	--	84215	110	215	7.8	14.5	--	5000	100	720
OCT , 1972										
02...	1215	84215	92	232	6.9	15.0	--	41000	150	200
OCT , 1973										
10...	0845	1028 <sup>c</sup> /	--	290	7.2	16.5	7.0	60000	2800	310
OCT , 1974										
28...	1145	1028	--	162	7.1	12.0	10.1	--	--	--
OCT , 1975										
30...	1045	1028	--	250	7.5	13.0	10.3	--	--	--
OCT , 1976										
19...	--	1028	--	285	7.8	10.0	12.0	--	--	--
OCT , 1977										
26...	1115	80010 <sup>d</sup> /	--	245	--	13.5	9.6	--	--	--
NOV , 1978										
03...	1030	80010	--	390	7.4	10.5	12.0	--	--	--
NOV , 1979										
02...	1445	80010	--	223	6.7	13.0	12.1	--	--	--
NOV , 1980										
12...	1230	80010	--	390	7.4	6.5	12.3	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV , 1970										
11...	--	--	22	--	8.6	--	13	--	3.7	--
MAY , 1971										
25...	--	--	19	--	8.2	--	11	--	1.9	--
OCT , 1971										
19...	--	--	18	--	8.4	--	8.8	--	2.2	--
OCT , 1972										
02...	--	--	24	--	8.3	--	13	--	2.6	--
OCT , 1973										
10...	90	24	--	21	--	9.1	--	17	--	3.1
OCT , 1974										
28...	100	28	--	25	--	10	--	15	--	3.1
OCT , 1975										
30...	87	26	--	21	--	8.3	--	9.5	--	2.6
OCT , 1976										
19...	97	34	--	24	--	9.0	--	13	--	3.3
OCT , 1977										
26...	110	39	--	26	--	11	--	14	--	3.4
NOV , 1978										
03...	110	35	--	26	--	10	--	16	--	3.2
NOV , 1979										
02...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
12...	110	--	--	26	--	10	--	19	--	4.8

<sup>a</sup>/ Additional data are available from 1925 to 1974.

<sup>b</sup>/ Chester County Health Department Laboratory, Pennsylvania.

<sup>c</sup>/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

<sup>d</sup>/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

<sup>e</sup>/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 (Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.)

01480950 - EAST BRANCH BRANDYWINE CREEK AT WAWASET, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
NOV , 1970	--	--	--	29	18	--	--	--	188	--
MAY , 1971	--	--	--	30	14	--	--	--	130	--
OCT , 1971	--	--	--	27	14	--	--	--	165	--
OCT , 1972	--	--	--	45	20	--	--	--	149	--
OCT , 1973	86	0	71	24	18	.30	13	--	--	150
OCT , 1974	93	0	76	27	19	.20	11	177	--	160
OCT , 1975	74	0	61	23	15	.10	12	142	--	130
OCT , 1976	77	0	63	27	18	.10	13	157	--	150
OCT , 1977	86	--	71	28	19	.10	9.7	168	--	150
NOV , 1978	87	0	71	34	22	.10	11	197	--	170
NOV , 1979	--	--	50	21	15	.10	11	--	--	--
NOV , 1980	--	--	--	34	30	.20	13	208	--	--

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
NOV , 1970	1.4	.060	--	<.010	<.01	--	--	.340	.330
MAY , 1971	3.0	.024	--	.370	.09	--	--	.220	.141
OCT , 1971	3.9	.020	--	<.010	.71	--	--	.265	.144
OCT , 1972	2.8	.114	--	.400	.76	--	--	.550	.540
OCT , 1973	2.3	.003	2.3	.200	.78	.98	3.3	.640	.640
OCT , 1974	1.7	--	--	.480	.82	1.3	--	.530	.430
OCT , 1975	2.3	--	--	.060	.67	.73	--	.220	.190
OCT , 1976	1.9	.050	1.9	.190	.39	.58	2.5	.430	.440
OCT , 1977	2.2	.040	2.2	.100	.33	.43	2.6	.530	.500
NOV , 1978	2.7	.060	2.8	.150	.50	.65	3.5	.560	.540
NOV , 1979	--	--	--	.020	.24	.26	--	.290	--
NOV , 1980	2.2	.040	2.2	1.90	.90	2.8	5.0	1.20	1.00

## 01480950 - EAST BRANCH BRANDYWINE CREEK AT WAWASET, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1970	--	<100	--	<900	--	<250	--	<100	--	--
MAY , 1971	--	<150	--	<200	--	<250	--	550	--	--
OCT , 1971	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	<500	--	--
OCT , 1973	ND	--	ND	--	5	--	<20	350	--	2
OCT , 1974	ND	--	ND	--	<2	--	ND	--	190	2
OCT , 1975	<2	--	ND	--	ND	--	ND	--	40	12
OCT , 1976	<2	--	<20	--	<2	--	<20	--	90	69
OCT , 1977	ND	--	<2	--	ND	--	2	--	100	7
NOV , 1978	ND	--	ND	--	ND	--	5	--	110	2
NOV , 1979	--	10	--	--	--	10	--	--	--	--
NOV , 1980	1	--	6	--	1	--	9	--	80	1

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV , 1970	<50	<250	--	<250	--	<20	--	--	13	3.9
MAY , 1971	<50	<250	--	<250	--	<20	--	--	10	3.5
OCT , 1971	<50	<250	--	<250	--	<50	--	--	3	.89
OCT , 1972	<50	<250	--	<250	--	<20	--	--	3	.75
OCT , 1973	--	80	--	--	ND	--	20	--	--	--
OCT , 1974	--	--	80	--	6	--	<20	--	--	--
OCT , 1975	--	--	20	--	2	--	<20	--	--	--
OCT , 1976	--	--	50	--	14	--	20	--	--	--
OCT , 1977	--	--	50	--	3	--	<20	.00	--	--
NOV , 1978	--	--	--	--	--	--	--	--	--	--
NOV , 1979	--	--	--	--	--	10	--	--	--	--
NOV , 1980	--	--	70	--	4	--	9	.10	--	--



TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01481030 - BRANDYWINE CREEK NEAR CHADDS FORD, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sub>d</sub>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV , 1970										
11...	--	84215 <sub>a</sub> /	250	185	7.3	14.0	--	2800	--	300
MAY , 1971										
25...	--	84215	260	195	7.6	19.0	--	2200	400	77
OCT , 1971										
19...	--	84215	500	315	7.9	14.5	--	14600	30	180
OCT , 1972										
02...	1315	84215	170	195	6.9	16.0	--	17300	220	140
OCT , 1973										
10...	0800	1028 <sub>b</sub> /	161	250	7.1	16.0	8.6	23000	760	220
OCT , 1974										
30...	0910	1028	156	245	6.8	11.0	9.2	--	E110	--
OCT , 1975										
30...	1130	1028	425	210	7.4	13.5	10.0	--	--	--
OCT , 1976										
19...	1345	1028	198	270	7.7	9.5	11.6	--	--	--
OCT , 1977										
27...	1330	80010 <sub>c</sub> /	246	240	7.3	15.0	9.4	--	--	--
NOV , 1978										
03...	1430	80010	185	300	7.7	10.5	12.8	--	--	--
NOV , 1979										
05...	1330	80010	665	202	6.5	9.0	12.0	--	--	--
NOV , 1980										
12...	1545	80010	111	281	7.6	6.0	12.0	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV , 1970										
11...	--	--	21	--	7.4	--	13	--	4.3	--
MAY , 1971										
25...	--	--	15	--	6.8	--	8.5	--	2.1	--
OCT , 1971										
19...	--	--	17	--	6.9	--	8.1	--	2.5	--
OCT , 1972										
02...	--	--	20	--	7.1	--	10	--	2.6	--
OCT , 1973										
10...	81	24	--	19	--	8.2	--	13	--	3.2
OCT , 1974										
30...	83	26	--	20	--	8.0	--	12	--	3.1
OCT , 1975										
30...	81	32	--	20	--	7.5	--	8.0	--	2.6
OCT , 1976										
19...	82	31	--	20	--	7.7	--	11	--	3.0
OCT , 1977										
27...	87	34	--	21	--	8.3	--	11	--	3.5
NOV , 1978										
03...	93	39	--	23	--	8.7	--	11	--	3.0
NOV , 1979										
05...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
12...	95	--	--	24	--	8.6	--	13	--	3.9

<sub>a</sub>/ Chester County Health Department Laboratory, Pennsylvania.

<sub>b</sub>/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

<sub>c</sub>/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

<sub>d</sub>/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

## 01481030 - BRANDYWINE CREEK NEAR CHADDS FORD, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
NOV , 1970	--	--	--	24	16	--	--	--	156	--
MAY , 1971	--	--	--	25	11	--	--	--	111	--
OCT , 1971	--	--	--	25	9.3	--	--	--	116	--
OCT , 1972	--	--	--	38	16	--	--	--	122	--
OCT , 1973	69	0	57	22	16	.30	11	--	--	130
OCT , 1974	69	0	57	23	17	.30	9.7	150	--	130
OCT , 1975	60	0	49	21	14	.30	11	133	--	110
OCT , 1976	62	0	51	23	17	.10	13	136	--	130
OCT , 1977	65	0	53	25	17	.10	11	139	--	130
NOV , 1978	66	0	54	25	18	.10	10	152	--	130
NOV , 1979	--	--	44	22	14	.10	12	--	--	--
NOV , 1980	--	--	--	27	25	.20	11	177	--	--

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
NOV , 1970	1.9	.060	--	<.000	<.00	--	--	.300	.300
MAY , 1971	2.7	.030	--	.260	<.00	--	--	.170	.110
OCT , 1971	3.2	.020	--	<.000	.60	--	--	.200	.120
OCT , 1972	2.7	.050	--	.090	.47	--	--	.330	.300
OCT , 1973	2.4	.010	2.4	.090	.73	.82	3.2	.380	.370
OCT , 1974	2.3	--	--	.090	.60	.69	--	.280	.240
OCT , 1975	2.7	--	--	.050	.81	.86	--	.160	.130
OCT , 1976	2.4	.040	2.4	.180	.42	.60	3.0	.260	.140
OCT , 1977	2.2	.030	2.2	.060	.40	.46	2.7	.280	.230
NOV , 1978	2.6	.030	2.6	.090	.20	.29	2.9	.240	.230
NOV , 1979	--	--	2.2	.010	.31	.32	2.5	.150	--
NOV , 1980	2.5	.030	2.5	.560	.54	1.1	3.6	.510	.460

## 01481030 - BRANDYWINE CREEK NEAR CHADDS FORD, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV , 1970	--	<100	--	<900	--	<250	--	240	--	--
MAY , 1971	--	<150	--	<200	--	<250	--	380	--	--
OCT , 1971	--	<100	--	<200	--	<250	--	<150	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	<100	--	--
OCT , 1973	--	--	--	--	--	--	--	370	--	2
OCT , 1974	--	--	--	--	--	--	--	--	180	<2
OCT , 1975	<2	--	<20	--	<2	--	--	--	60	6
OCT , 1976	<2	--	<20	--	2	--	--	--	80	93
OCT , 1977	--	--	<2	--	--	--	3	--	160	10
NOV , 1978	--	--	--	--	--	--	3	--	170	3
NOV , 1979	--	10	--	--	--	0	--	--	--	--
NOV , 1980	1	--	4	--	1	--	5	--	120	--

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
NOV , 1970	<50	<250	--	<250	--	<20	--	--	21	14
MAY , 1971	<50	<250	--	<250	--	<20	--	--	10	7.0
OCT , 1971	<50	<250	--	<250	--	<50	--	--	--	--
OCT , 1972	<50	<250	--	<250	--	<20	--	--	6	2.8
OCT , 1973	--	60	--	--	7	--	20	--	--	--
OCT , 1974	--	--	80	--	11	--	<20	--	--	--
OCT , 1975	--	--	30	--	6	--	<20	--	--	--
OCT , 1976	--	--	30	--	7	--	<20	--	--	--
OCT , 1977	--	--	70	--	6	--	<20	--	--	--
NOV , 1978	--	--	60	--	3	--	--	--	--	--
NOV , 1979	--	--	--	--	--	20	--	--	--	--
NOV , 1980	--	--	60	--	7	--	5	.10	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01494900 - EAST BRANCH BIG ELK CREEK AT ELKVIEW, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sup>d</sup>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
JUN , 1970										
03...	--	84215 <sup>a</sup> /	9.1	75	7.0	19.0	--	370	--	10
NOV 03...	--	84215	5.1	60	6.8	11.0	--	1300	--	200
MAY 24, 1971	--	84215	13	115	7.2	17.0	--	670	90	260
OCT 18...	--	84215	12	115	7.4	12.5	--	44000	340	170
OCT 23, 1972	0740	84215	7.2	105	6.5	8.5	--	930	150	200
OCT 09...	0900	1028 <sup>b</sup> /	--	120	6.6	15.0	9.8	6600	240	96
OCT 30, 1974	0100	1028	--	120	6.9	12.5	--	--	--	--
NOV 12, 1975	1245	1028	--	130	7.0	10.5	11.5	--	--	--
NOV 01...	1110	1028	--	160	6.2	9.0	11.7	--	--	--
NOV 02...	1200	80010 <sup>c</sup> /	--	135	7.0	14.0	10.8	--	--	--
OCT 25, 1978	1500	80010	--	145	7.4	10.0	12.0	--	--	--
NOV 06...	1500	80010	--	145	--	8.5	11.8	--	--	--
NOV 20...	0830	80010	--	150	7.0	3.0	13.6	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JUN , 1970										
03...	--	--	19	--	3.7	--	7.2	--	3.1	--
NOV 03...	--	--	6.5	--	3.1	--	5.0	--	4.3	--
MAY 24, 1971	--	--	7.3	--	3.6	--	4.8	--	3.7	--
OCT 18...	--	--	10	--	3.3	--	5.0	--	2.2	--
OCT 23, 1972	--	--	7.2	--	3.7	--	5.6	--	2.2	--
OCT 09...	35	17	--	7.5	--	3.9	--	5.7	--	2.1
OCT 30, 1974	36	15	--	8.5	--	3.6	--	5.0	--	1.8
NOV 12...	46	23	--	12	--	4.0	--	5.0	--	2.7
NOV 01...	46	16	--	10	--	5.2	--	6.4	--	4.3
NOV 02...	40	15	--	9.1	--	4.3	--	6.8	--	3.1
OCT 25, 1978	41	18	--	9.0	--	4.5	--	6.5	--	3.6
NOV 06...	--	--	--	--	--	--	--	--	--	--
NOV 20...	46	--	--	10	--	5.0	--	6.9	--	3.3

<sup>a</sup>/ Chester County Health Department Laboratory, Pennsylvania.

<sup>b</sup>/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

<sup>c</sup>/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

<sup>d</sup>/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius;  
 Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter;  
 T/DAY, tons per day; dashes indicate no data.]

01494900 - EAST BRANCH BIG ELK CREEK AT ELKVIEW, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
JUN , 1970										
03...	--	--	--	13	5.3	--	--	--	157	--
NOV 03...	--	--	--	36	7.7	--	--	--	91	--
MAY , 1971										
24...	--	--	--	6.0	8.2	--	--	--	46	--
OCT 18...	--	--	--	2.7	6.1	--	--	--	64	--
OCT , 1972										
23...	--	--	--	13	6.7	--	--	--	52	--
OCT , 1973										
09...	26	0	21	3.1	8.5	.20	11	--	--	53
OCT , 1974										
30...	25	0	21	5.0	8.5	<.10	9.8	71	--	55
NOV , 1975										
12...	28	0	23	7.2	9.8	.20	11	91	--	66
NOV , 1976										
01...	36	0	30	13	12	.10	12	91	--	81
NOV , 1977										
02...	30	0	25	6.4	9.6	.10	9.1	79	--	63
OCT , 1978										
25...	28	0	23	4.9	11	.10	10	93	--	63
NOV , 1979										
06...	--	--	23	9.9	11	.10	12	--	--	--
NOV , 1980										
20...	--	--	--	12	12	.10	13	103	--	--

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
JUN , 1970									
03...	2.6	--	--	--	--	--	--	--	.013
NOV 03...	1.9	.010	--	--	--	--	--	.020	.010
MAY , 1971									
24...	3.6	.010	--	.200	.28	--	--	.090	.040
OCT 18...	3.7	.010	--	.010	.33	--	--	.050	.010
OCT , 1972									
23...	3.6	<.010	--	.050	.01	--	--	.040	.030
OCT , 1973									
09...	3.6	.004	3.6	.100	.24	.34	3.9	.050	.040
OCT , 1974									
30...	3.8	--	--	.060	.54	.60	--	.090	.070
NOV , 1975									
12...	4.5	--	--	.010	.59	.60	--	.090	.070
NOV , 1976									
01...	3.3	.030	3.3	.050	.35	.40	3.7	.100	.060
NOV , 1977									
02...	3.4	.020	3.4	.070	.29	.36	3.8	.180	.140
OCT , 1978									
25...	4.2	.180	4.4	.090	.46	.55	5.0	.200	.170
NOV , 1979									
06...	--	--	--	.090	1.2	1.3	--	.160	--
NOV , 1980									
20...	4.0	.010	4.0	.050	.15	.20	4.2	.080	.060

## 01494900 - EAST BRANCH BIG ELK CREEK AT ELKVIEW, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
JUN , 1970	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
NOV 03...	--	<100	--	<900	--	<250	--	<100	--	--
MAY , 1971	--	<150	--	<200	--	<250	--	160	--	--
24...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 18...	--	<100	--	<200	--	<250	--	960	--	--
23...	--	<100	--	<200	--	<250	--	90	--	ND
OCT , 1972	ND	--	ND	--	ND	--	ND	80	--	ND
09...	ND	--	ND	--	ND	--	<20	--	80	ND
OCT , 1974	ND	--	ND	--	ND	--	<20	--	80	ND
30...	ND	--	ND	--	ND	--	<20	--	80	ND
NOV , 1975	<2	--	<20	--	ND	--	ND	--	30	5
12...	<2	--	<20	--	ND	--	<20	--	150	5
NOV , 1976	2	--	<20	--	ND	--	<20	--	150	5
01...	<2	--	ND	--	ND	--	4	--	90	5
NOV , 1977	<2	--	ND	--	ND	--	<2	--	100	8
02...	<2	--	ND	--	<2	--	<2	--	100	8
OCT , 1978	<2	--	ND	--	<2	--	<2	--	100	8
25...	<2	--	ND	--	<2	--	<2	--	100	8
NOV , 1979	--	10	--	--	--	10	--	--	--	--
06...	--	10	--	--	--	10	--	--	--	--
NOV , 1980	1	--	.00	--	1	--	2	--	70	1
20...	1	--	.00	--	1	--	2	--	70	1

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
JUN , 1970	--	--	--	--	--	--	--	--	7	.17
03...	--	--	--	--	--	--	--	--	7	.17
NOV 03...	<50	<250	--	<250	--	<20	--	--	--	--
MAY , 1971	<50	<250	--	<250	--	<20	--	--	4	.14
24...	<50	<250	--	<250	--	<20	--	--	2	.06
OCT 18...	<50	<250	--	<250	--	<20	--	--	--	--
23...	<50	<250	--	<250	--	<20	--	--	--	--
OCT , 1972	--	20	--	--	ND	--	<20	--	--	--
09...	--	--	30	--	<2	--	30	--	--	--
OCT , 1974	--	--	30	--	2	--	<20	--	--	--
30...	--	--	70	--	5	--	<20	--	--	--
NOV , 1975	--	--	50	--	ND	--	20	.00	--	--
12...	--	--	<10	--	<2	--	ND	.10	--	--
NOV , 1976	--	--	--	--	--	20	--	--	--	--
01...	--	--	--	--	--	20	--	--	--	--
NOV , 1977	--	--	30	--	0	--	4	.10	--	--
02...	--	--	30	--	0	--	4	.10	--	--
OCT , 1978	--	--	30	--	0	--	4	.10	--	--
25...	--	--	30	--	0	--	4	.10	--	--
NOV , 1979	--	--	30	--	0	--	4	.10	--	--
06...	--	--	30	--	0	--	4	.10	--	--
NOV , 1980	--	--	30	--	0	--	4	.10	--	--
20...	--	--	30	--	0	--	4	.10	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01494950 - WEST BRANCH BIG ELK CREEK NEAR OXFORD, PA

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
JUN , 1970										
03...	--	84215a/	9.9	110	8.0	20.0	--	1800	--	<1
NOV 03...	--	84215	6.3	80	7.1	12.0	--	1100	--	120
MAY , 1971										
24...	--	84215	14	120	7.5	17.0	--	95000	3600	3500
OCT 18...	--	84215	12	120	7.4	12.5	--	14000	460	380
OCT , 1972										
23...	0920	84215	7.2	110	7.2	9.0	--	2100	230	180
OCT , 1973										
09...	0940	1028b/	--	140	6.6	15.0	9.8	12000	560	160
OCT , 1974										
30...	1235	1028	--	131	7.3	14.0	--	--	--	--
NOV , 1975										
12...	1400	1028	--	150	7.0	10.5	11.8	--	--	--
NOV , 1976										
01...	1230	1028	--	140	6.9	10.0	11.3	--	--	--
NOV , 1977										
02...	1230	80010c/	--	160	7.4	15.0	12.2	--	--	--
OCT , 1978										
25...	1415	80010	--	190	7.1	11.5	13.2	--	--	--
NOV , 1979										
06...	1545	80010	--	136	5.7	9.0	12.7	--	--	--
NOV , 1980										
20...	1000	80010	--	150	7.2	4.0	14.0	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JUN , 1970										
03...	--	--	6.6	--	3.9	--	6.0	--	4.1	--
NOV 03...	--	--	7.8	--	3.4	--	6.5	--	2.8	--
MAY , 1971										
24...	--	--	7.8	--	4.0	--	6.5	--	2.4	--
OCT 18...	--	--	8.7	--	3.5	--	6.7	--	2.5	--
OCT , 1972										
23...	--	--	6.3	--	3.6	--	6.6	--	2.1	--
OCT , 1973										
09...	38	17	--	8.0	--	4.4	--	9.0	--	2.4
OCT , 1974										
30...	36	16	--	8.0	--	3.9	--	6.0	--	2.6
NOV , 1975										
12...	48	24	--	12	--	4.5	--	6.8	--	3.2
NOV , 1976										
01...	65	36	--	19	--	4.2	--	5.1	--	3.6
NOV , 1977										
02...	--	--	--	--	--	--	--	--	--	--
OCT , 1978										
25...	45	26	--	10	--	4.8	--	7.5	--	2.3
NOV , 1979										
06...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
20...	47	--	--	9.9	--	5.3	--	8.8	--	3.1

a/ Chester County Health Department Laboratory, Pennsylvania.

b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

## 01494950 - WEST BRANCH BIG ELK CREEK NEAR OXFORD, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
JUN 03, 1970	--	--	--	2.7	7.4	--	--	--	138	--
NOV 03, 1970	--	--	--	18	9.8	--	--	--	101	--
MAY 24, 1971	--	--	--	9.9	9.5	--	--	--	54	--
OCT 18, 1971	--	--	--	6.3	10	--	--	--	64	--
OCT 23, 1972	--	--	--	13	9.2	--	--	--	76	--
OCT 09, 1973	26	0	21	4.5	12	.30	9.9	--	--	63
OCT 30, 1974	24	0	20	6.3	11	<.10	9.3	77	--	59
NOV 12, 1975	30	0	25	7.9	13	.10	11	92	--	73
NOV 01, 1976	35	0	29	12	9.7	.10	12	83	--	83
NOV 02, 1977	30	0	25	10	15	<.10	9.2	94	--	--
OCT 25, 1978	23	0	19	6.8	14	.10	9.3	96	--	66
NOV 06, 1979	--	--	19	9.2	12	.10	11	--	--	--
NOV 20, 1980	--	--	--	12	14	.10	13	105	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
JUN 03, 1970	2.9	--	--	--	--	--	--	--	.013
NOV 03, 1970	2.2	.030	--	--	--	--	--	.150	.150
MAY 24, 1971	4.6	.020	--	.150	.05	--	--	.060	.020
OCT 18, 1971	4.0	.011	--	.010	.72	--	--	.110	.040
OCT 23, 1972	4.0	.013	--	.060	.29	--	--	.140	.110
OCT 09, 1973	4.3	--	--	.130	.20	.33	--	.200	.190
OCT 30, 1974	4.7	--	--	.090	.56	.65	--	.180	.140
NOV 12, 1975	4.5	--	--	.010	.70	.71	--	.130	.090
NOV 01, 1976	3.0	.010	3.0	.070	.38	.45	3.5	.090	.080
NOV 02, 1977	3.8	.030	3.8	.110	.48	.59	4.4	.190	.150
OCT 25, 1978	4.4	.010	4.4	.060	.25	.31	4.7	.100	.090
NOV 06, 1979	--	--	4.2	.070	.47	.54	4.7	.070	--
NOV 20, 1980	4.5	.020	4.5	.000	.12	.12	4.6	.130	.100



## 01494950 - WEST BRANCH BIG ELK CREEK NEAR OXFORD, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
JUN , 1970	--	--	--	--	--	--	--	--	--	--
NOV 03...	--	--	--	--	--	--	--	--	--	--
NOV 03...	--	<100	--	<200	--	<250	--	<100	--	--
MAY , 1971	--	<150	--	<200	--	<150	--	160	--	--
OCT 24...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 18...	--	<100	--	<200	--	<250	--	270	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	170	--	ND
OCT 23...	--	--	ND	--	ND	--	ND	--	90	ND
OCT 09...	ND	--	ND	--	ND	--	<20	--	50	7
OCT , 1974	ND	--	ND	--	ND	--	ND	--	120	3
NOV , 1975	<2	--	ND	--	ND	--	<20	--	--	--
NOV 12...	<2	--	<20	--	ND	--	<20	--	50	2
NOV , 1976	<2	--	--	--	--	--	--	--	--	--
NOV 01...	--	--	--	--	--	--	--	--	--	--
NOV , 1977	--	--	--	--	--	--	--	--	--	--
OCT 02...	--	--	--	--	--	--	--	--	--	--
OCT , 1978	2	--	ND	--	2	--	2	--	50	2
NOV 25...	--	<10	--	--	--	0	--	--	--	--
NOV , 1979	--	--	--	--	--	--	--	--	--	--
NOV 06...	--	--	--	--	--	--	--	--	--	--
NOV , 1980	0	--	.00	--	1	--	20	--	50	3
NOV 20...	--	--	--	--	--	--	--	--	--	--

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
JUN , 1970	--	<250	--	--	--	--	--	--	70	1.9
NOV 03...	--	<250	--	<250	--	<20	--	--	--	--
NOV 03...	<50	<250	--	<250	--	<20	--	--	4	.15
MAY , 1971	<50	<250	--	<250	--	<20	--	--	4	.13
OCT 24...	<50	<250	--	<250	--	<50	--	--	--	--
OCT 18...	<50	<250	--	<250	--	<20	--	--	--	--
OCT 21...	<50	<250	--	<250	--	<20	--	--	--	--
OCT , 1973	--	20	--	--	<2	--	20	--	--	--
OCT 09...	--	--	30	--	2	--	<20	--	--	--
OCT , 1974	--	--	30	--	3	--	20	--	--	--
NOV , 1975	--	--	80	--	4	--	<20	--	--	--
NOV 12...	--	--	--	--	--	--	--	.00	--	--
NOV , 1976	--	--	--	--	--	--	--	.10	--	--
NOV 01...	--	--	--	--	--	--	--	--	--	--
NOV , 1977	--	--	--	--	--	--	--	--	--	--
OCT 02...	--	--	20	--	ND	--	ND	--	--	--
OCT , 1978	--	--	--	--	--	10	--	--	--	--
NOV 25...	--	--	--	--	--	--	--	--	--	--
NOV , 1979	--	--	30	--	0	--	3	.00	--	--
NOV 06...	--	--	--	--	--	--	--	--	--	--
NOV , 1980	--	--	--	--	--	--	--	--	--	--
NOV 20...	--	--	--	--	--	--	--	--	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01578340 - EAST BRANCH OCTORARO CREEK AT CHRISTIANA, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sub>d</sub>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
JUN , 1970										
08...	--	84215a/	8.5	100	7.8	14.0	--	10000	--	390
NOV										
03...	--	84215	20	160	7.2	11.0	--	8600	--	600
MAY , 1971										
24...	--	84215	14	195	7.1	12.0	--	17000	3900	320
OCT										
18...	--	84215	13	195	7.6	13.0	--	136000	6300	2300
OCT , 1972										
23...	1130	84215	8.3	180	7.3	9.5	--	8300	1100	860
OCT , 1973										
09...	1040	1028b/	--	240	6.7	15.5	10.0	80000	22000	900
OCT , 1974										
30...	0140	1028	--	230	7.0	14.0	--	--	--	--
NOV , 1975										
12...	0900	1028	--	220	6.8	9.0	11.2	--	--	--
NOV , 1976										
02...	1410	1028	--	240	7.2	10.0	11.8	--	--	--
NOV , 1977										
02...	0830	80010c/	--	190	7.1	13.5	9.6	--	--	--
OCT , 1978										
26...	1115	80010	--	300	6.2	11.0	11.2	--	--	--
NOV , 1979										
07...	1230	80010	--	217	6.5	10.0	12.2	--	--	--
NOV , 1980										
13...	1530	80010	--	270	6.9	7.0	12.7	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JUN , 1970										
08...	--	--	15	--	6.2	--	6.5	--	3.6	--
NOV										
03...	--	--	16	--	6.8	--	7.5	--	3.6	--
MAY , 1971										
24...	--	--	16	--	7.8	--	6.9	--	2.5	--
OCT										
18...	--	--	17	--	7.7	--	7.3	--	3.3	--
OCT , 1972										
23...	--	--	15	--	7.6	--	7.5	--	3.0	--
OCT , 1973										
09...	77	43	--	17	--	8.3	--	8.0	--	3.1
OCT , 1974										
30...	77	45	--	18	--	7.8	--	6.5	--	3.1
NOV , 1975										
12...	78	44	--	17	--	8.7	--	6.4	--	3.1
NOV , 1976										
02...	81	47	--	18	--	8.8	--	6.9	--	3.8
NOV , 1977										
02...	80	47	--	18	--	8.4	--	8.0	--	3.6
OCT , 1978										
26...	66	51	--	14	--	7.5	--	7.3	--	3.4
NOV , 1979										
07...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
13...	85	--	--	20	--	8.6	--	8.8	--	3.7

a/ Chester County Health Department Laboratory, Pennsylvania.  
 b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.  
 c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.  
 d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01578340 - EAST BRANCH OCTORARO CREEK AT CHRISTIANA, PA--Continued

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
JUN , 1970										
08...	--	--	--	32	11	--	--	--	170	--
NOV 03...	--	--	--	28	14	--	--	--	138	--
MAY , 1971										
24...	--	--	--	24	8.2	--	--	--	107	--
OCT 18...	--	--	--	21	10	--	--	--	115	--
OCT , 1972										
23...	--	--	--	34	12	--	--	--	141	--
OCT , 1973										
09...	41	0	34	24	14	.30	15	--	--	110
OCT , 1974										
30...	39	0	32	25	14	.20	13	138	--	110
NOV , 1975										
12...	42	0	34	25	14	.10	14	149	--	110
NOV , 1976										
02...	42	0	34	28	14	.10	16	148	--	120
NOV , 1977										
02...	40	0	33	26	14	<.10	13	148	--	110
OCT , 1978										
26...	18	0	15	26	13	.10	14	160	--	94
NOV , 1979										
07...	--	--	27	27	13	.10	13	--	--	--
NOV , 1980										
13...	--	--	--	28	16	.10	16	163	--	--

DATE	NITROGEN NITRATE TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NO2+NO3 TOTAL (MG/L AS N)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN ORGANIC TOTAL (MG/L AS N)	NITROGEN+AMMONIA+ORGANIC TOTAL (MG/L AS N)	NITROGEN TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
JUN , 1970									
08...	4.7	--	--	--	--	--	--	--	.023
NOV 03...	3.9	.020	--	--	--	--	--	.010	.010
MAY , 1971									
24...	6.1	.020	--	.310	.24	--	--	.050	.010
OCT 18...	6.9	.013	--	.010	1.5	--	--	.140	.052
OCT , 1972									
23...	6.1	.020	--	.030	.38	--	--	.040	.020
OCT , 1973									
09...	6.5	.003	6.5	.130	.32	.45	7.0	.090	.060
OCT , 1974									
30...	6.1	--	--	.040	.56	.60	--	.040	.030
NOV , 1975									
12...	7.2	--	--	<.010	.72	.72	--	.060	.020
NOV , 1976									
02...	6.0	.030	6.0	.130	.32	.45	6.5	.080	.040
NOV , 1977									
02...	5.8	.020	5.8	.100	.47	.57	6.4	.040	.010
OCT , 1978									
26...	6.9	.030	6.9	.130	.43	.56	7.5	.060	.020
NOV , 1979									
07...	--	--	7.0	.070	.31	.38	7.4	.150	--
NOV , 1980									
13...	6.6	.040	6.6	.160	.73	.89	7.5	.320	.120

## 01578340 - EAST BRANCH OCTORARO CREEK AT CHRISTIANA, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
JUN , 1970	--	<200	--	<500	--	--	--	<250	--	--
08...	--	<200	--	<500	--	--	--	<250	--	--
NOV 03...	--	<100	--	<900	--	<250	--	<100	--	--
MAY , 1971	--	<150	--	<200	--	<250	--	380	--	--
24...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 18...	--	<100	--	<200	--	<250	--	400	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	270	--	ND
23...	ND	--	ND	--	ND	--	ND	--	80	ND
OCT , 1973	<2	--	ND	--	ND	--	ND	--	30	4
09...	<2	--	ND	--	<2	--	ND	--	80	2
OCT , 1974	<2	--	ND	--	ND	--	ND	--	90	8
30...	ND	--	ND	--	ND	--	4	--	130	10
NOV , 1975	<2	--	ND	--	<2	--	ND	--	--	--
12...	<2	--	<20	--	ND	--	ND	--	80	2
NOV , 1976	<2	--	ND	--	ND	--	ND	--	90	8
02...	ND	--	ND	--	ND	--	4	--	130	10
OCT , 1977	<2	--	<2	--	2	--	<2	--	--	--
26...	--	10	--	--	--	0	--	--	--	--
NOV , 1978	--	10	--	--	--	0	--	--	--	--
07...	--	10	--	--	--	0	--	--	--	--
NOV , 1980	1	--	.00	--	1	--	7	--	70	0
13...	1	--	.00	--	1	--	7	--	70	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
JUN , 1970	<100	<250	--	<250	--	<250	--	--	21	.48
08...	<50	<250	--	<250	--	<20	--	--	--	--
NOV 03...	<50	<250	--	<250	--	30	--	--	12	.45
MAY , 1971	<50	<250	--	<250	--	<50	--	--	5	.18
24...	<50	<250	--	<250	--	<20	--	--	--	--
OCT 18...	--	20	--	--	ND	--	<20	--	--	--
OCT , 1972	--	--	30	--	4	--	<20	--	--	--
23...	--	--	40	--	<2	--	20	--	--	--
OCT , 1973	--	--	80	--	3	--	ND	--	--	--
09...	--	--	110	--	ND	--	<20	.00	--	--
OCT , 1974	--	--	30	--	<2	--	20	.10	--	--
30...	--	--	--	--	--	10	--	--	--	--
NOV , 1975	--	--	--	--	--	10	--	--	--	--
12...	--	--	--	--	--	10	--	--	--	--
NOV , 1976	--	--	--	--	--	10	--	--	--	--
02...	--	--	--	--	--	10	--	--	--	--
NOV , 1977	--	--	--	--	--	10	--	--	--	--
02...	--	--	--	--	--	10	--	--	--	--
OCT , 1978	--	--	--	--	--	10	--	--	--	--
26...	--	--	--	--	--	10	--	--	--	--
NOV , 1979	--	--	--	--	--	10	--	--	--	--
07...	--	--	--	--	--	10	--	--	--	--
NOV , 1980	--	--	60	--	0	--	4	.00	--	--
13...	--	--	60	--	0	--	4	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01578343 - VALLEY CREEK NEAR ATGLEN, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sub>d</sub>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
JUN , 1970										
08...	--	84215 <sub>a</sub> /	9.1	145	7.9	17.0	--	--	--	--
NOV										
03...	--	84215	5.4	180	7.1	11.0	--	1300	--	120
MAY , 1971										
24...	--	84215	9.8	200	7.4	14.0	--	20700	1100	270
OCT										
18...	--	84215	10	202	7.7	13.0	--	56000	1200	330
OCT , 1972										
23...	1245	84215	7.8	200	7.9	9.5	--	150	64	64
OCT , 1973										
09...	1125	1028 <sub>b</sub> /	--	240	7.1	16.0	10.8	8000	800	240
OCT , 1974										
30...	0200	1028	--	250	7.1	14.0	--	--	--	--
NOV , 1975										
12...	1000	1028	--	240	7.2	9.5	11.5	--	--	--
NOV , 1976										
02...	1500	1028	--	240	7.4	10.0	11.6	--	--	--
NOV , 1977										
02...	0900	80010 <sub>c</sub> /	--	235	7.3	14.0	10.0	--	--	--
OCT , 1978										
26...	1230	80010	--	255	6.7	10.5	10.6	--	--	--
NOV , 1979										
07...	1330	80010	--	227	6.5	11.0	11.2	--	--	--
NOV , 1980										
13...	1415	80010	--	262	6.8	7.0	11.8	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JUN , 1970										
08...	--	--	--	--	--	--	--	--	--	--
NOV										
03...	--	--	22	--	6.5	--	6.5	--	3.4	--
MAY , 1971										
24...	--	--	20	--	7.0	--	5.9	--	2.1	--
OCT										
18...	--	--	21	--	7.0	--	5.8	--	2.6	--
OCT , 1972										
23...	--	--	18	--	6.6	--	8.4	--	2.7	--
OCT , 1973										
09...	80	35	--	20	--	7.4	--	8.2	--	2.8
OCT , 1974										
30...	93	45	--	25	--	7.5	--	6.9	--	2.7
NOV , 1975										
12...	92	44	--	23	--	8.4	--	6.7	--	3.1
NOV , 1976										
02...	92	49	--	24	--	7.8	--	5.9	--	2.8
NOV , 1977										
02...	97	35	--	26	--	7.9	--	7.5	--	3.3
OCT , 1978										
26...	99	53	--	27	--	7.7	--	8.2	--	2.8
NOV , 1979										
07...	--	--	--	--	--	--	--	--	--	--
NOV , 1980										
13...	92	--	--	24	--	7.8	--	10	--	3.2

<sub>a</sub>/ Chester County Health Department Laboratory, Pennsylvania.

<sub>b</sub>/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.

<sub>c</sub>/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.

<sub>d</sub>/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).

## 01578343 - VALLEY CREEK NEAR ATGLEN, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
JUN , 1970										
08...	--	--	--	--	--	--	--	--	--	--
NOV...										
03...	--	--	--	25	12	--	--	--	161	--
MAY , 1971										
24...	--	--	--	21	8.6	--	--	--	115	--
OCT...										
18...	--	--	--	16	11	--	--	--	111	--
OCT , 1972										
23...	--	--	--	29	13	--	--	--	131	--
OCT , 1973										
09...	56	0	46	18	14	.30	10	--	--	110
OCT , 1974										
30...	59	0	48	20	15	.10	9.8	143	--	120
NOV , 1975										
12...	58	0	48	24	15	.10	12	157	--	120
NOV , 1976										
02...	53	0	43	22	13	.10	11	138	--	110
NOV , 1977										
02...	77	0	63	23	14	<.10	10	155	--	130
OCT , 1978										
26...	56	0	46	23	15	.10	9.4	152	--	120
NOV , 1979										
07...	--	--	41	24	13	.10	10	--	--	--
NOV , 1980										
13...	--	--	--	22	18	.10	12	165	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
JUN , 1970									
08...	--	--	--	--	--	--	--	--	--
NOV...									
03...	3.4	.030	--	--	--	--	--	.154	.160
MAY , 1971									
24...	5.2	.012	--	.250	.11	--	--	.060	.023
OCT...									
18...	6.1	.020	--	.010	.60	--	--	.180	.110
OCT , 1972									
23...	5.3	.020	--	.020	.19	--	--	.200	.180
OCT , 1973									
09...	5.2	.071	5.3	.050	.21	.26	5.6	.130	.110
OCT , 1974									
30...	5.2	--	--	.080	.51	.59	--	.130	.110
NOV , 1975									
12...	6.6	--	--	.010	.63	.64	--	.100	.070
NOV , 1976									
02...	5.1	.050	5.1	.100	.43	.53	5.6	.080	.050
NOV , 1977									
02...	4.8	.060	4.9	.130	.29	.42	5.3	.080	.060
OCT , 1978									
26...	5.3	.070	5.4	.080	--	--	--	.100	.080
NOV , 1979									
07...	--	--	5.9	.010	.56	.57	6.5	.360	--
NOV , 1980									
13...	2.1	.030	2.1	.140	3.5	3.6	5.7	.160	.130

## 01578343 - VALLEY CREEK NEAR ATGLEN, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
JUN , 1970	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
NOV 03...	--	<100	--	<900	--	<250	--	<100	--	--
MAY 24... 1971	--	<150	--	<200	--	<250	--	390	--	--
OCT 18...	--	<100	--	<200	--	<250	--	<100	--	--
OCT 23... 1972	--	<100	--	<200	--	<250	--	250	--	--
OCT 09... 1973	ND	--	ND	--	3	--	ND	--	90	ND
OCT 30... 1974	ND	--	ND	--	ND	--	ND	--	60	<2
NOV 12... 1975	<2	--	ND	--	<2	--	<20	--	60	4
NOV 02... 1976	<2	--	<20	--	ND	--	<20	--	60	2
NOV 02... 1977	ND	--	<2	--	ND	--	2	--	80	4
OCT 26... 1978	ND	--	<2	--	<2	--	2	--	120	2
NOV 07... 1979	--	10	--	--	--	0	--	--	--	--
NOV 13... 1980	0	--	.00	--	2	--	3	--	50	0

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
JUN , 1970	--	--	--	--	--	--	--	--	24	.59
08...	--	--	--	--	--	--	--	--	--	--
NOV 03...	<50	<250	--	<250	--	<20	--	--	--	--
MAY 24... 1971	<50	<250	--	<250	--	<20	--	--	8	.21
OCT 18...	<50	<250	--	<250	--	<50	--	--	11	.30
OCT 23... 1972	<50	<250	--	<250	--	<20	--	--	--	--
OCT 09... 1973	--	--	<10	--	ND	--	20	--	--	--
OCT 30... 1974	--	--	<10	--	3	--	ND	--	--	--
NOV 12... 1975	--	--	70	--	<2	--	20	--	--	--
NOV 02... 1976	--	--	60	--	3	--	<20	--	--	--
NOV 02... 1977	--	--	40	--	ND	--	<20	.00	--	--
OCT 26... 1978	--	--	20	--	ND	--	ND	.10	--	--
NOV 07... 1979	--	--	--	--	--	10	--	--	--	--
NOV 13... 1980	--	--	30	--	2	--	3	.00	--	--

TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01578345 - EAST BRANCH OCTORARO CREEK AT STEELVILLE, PA

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM) <sub>d</sub>	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
JUN , 1970										
08...	--	84215 <sub>a</sub> /	27	140	7.3	17.0	--	14	--	6
NOV 03...	--	84215	17	160	7.1	11.0	--	13400	--	250
MAY 24...	--	84215	40	190	7.2	14.0	--	7300	1000	70
OCT 18...	--	84215	36	195	7.5	14.0	--	134000	270	100
OCT 23...	1300	84215	24	185	7.9	11.0	--	3100	460	240
OCT 09...	1200	1028 <sub>b</sub> /	--	240	7.3	16.5	10.2	7000	1300	210
OCT 30...	0220	1028	--	245	7.1	13.0	--	--	--	--
NOV 12...	1100	1028	--	230	7.3	10.0	11.3	--	--	--
NOV 01...	1345	1028	--	220	7.6	9.0	11.5	--	--	--
NOV 02...	1030	80010 <sub>c</sub> /	--	245	7.3	14.0	10.0	--	--	--
OCT 26...	1330	80010	--	255	6.8	11.0	10.2	--	--	--
NOV 07...	1430	80010	--	214	6.5	10.0	11.8	--	--	--
NOV 13...	1300	80010	--	275	6.9	5.5	13.4	--	--	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JUN , 1970										
08...	--	--	20	--	7.1	--	7.7	--	3.4	--
NOV 03...	--	--	--	--	--	--	--	--	--	--
MAY 24...	--	--	16	--	6.4	--	6.5	--	2.2	--
OCT 18...	--	--	18	--	6.5	--	6.5	--	2.8	--
OCT 23...	--	--	15	--	6.2	--	8.1	--	2.8	--
OCT 09...	77	34	--	19	--	7.2	--	10	--	3.0
OCT 30...	81	38	--	21	--	7.0	--	7.5	--	2.8
NOV 12...	92	46	--	24	--	7.8	--	6.5	--	3.1
NOV 01...	89	50	--	24	--	7.0	--	5.4	--	4.0
NOV 02...	70	22	--	14	--	8.6	--	8.5	--	2.2
OCT 26...	93	51	--	25	--	7.5	--	8.1	--	3.0
NOV 07...	--	--	--	--	--	--	--	--	--	--
NOV 13...	90	--	--	24	--	7.3	--	7.9	--	3.1

a/ Chester County Health Department Laboratory, Pennsylvania.  
 b/ U.S. Geological Survey Laboratories Harrisburg, Pennsylvania and Albany, New York.  
 c/ U.S. Geological Survey Central Laboratory Atlanta, Georgia.  
 d/ Formerly umhos/cm (micromhos per centimeters at 25° Celsius).



TABLE 2.-- Water-quality data for surface-water sites--Continued  
 [Units: CFS, cubic foot per second; US/CM, microsiemens per centimeter at 25° Celsius; Deg C, degrees Celsius; mg/L, milligrams per liter; COLS per 100 ML, colonies per 100 milliliters; UG/L, micrograms per liter; T/DAY, tons per day; dashes indicate no data.]

01578345 - EAST BRANCH OCTORARO CREEK AT STEELVILLE, PA--Continued

DATE	BICAR- BONATE FET-FLD (MG/L AS HCO3)	CAR- BONATE FET-FLD (MG/L AS CO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
JUN , 1970										
08 . . .	--	--	--	25	4.2	--	--	--	196	--
NOV 03 . . .	--	--	--	18	13	--	--	--	149	--
MAY 24 . . . 1971	--	--	--	25	9.1	--	--	--	114	--
OCT 18 . . .	--	--	--	16	13	--	--	--	102	--
OCT 23 . . . 1972	--	--	--	25	14	--	--	--	140	--
OCT 09 . . . 1973	52	0	43	21	14	.30	10	--	--	110
OCT 30 . . . 1974	53	0	43	23	20	.10	9.3	144	--	120
NOV 12 . . . 1975	56	0	46	22	14	.20	11	142	--	120
NOV 01 . . . 1976	47	0	39	22	12	.10	11	128	--	110
NOV 02 . . . 1977	58	0	48	13	12	<.10	16	119	--	100
OCT 26 . . . 1978	51	0	42	24	16	.10	9.3	148	--	120
NOV 07 . . . 1979	--	--	37	24	12	.10	9.3	--	--	--
NOV 13 . . . 1980	--	--	--	24	17	.10	11	156	--	--

DATE	NITRO- GEN NITRATE TOTAL (MG/L AS N)	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
JUN , 1970									
08 . . .	4.0	--	--	--	--	--	--	--	.010
NOV 03 . . .	3.2	.021	--	--	.02	--	--	.261	.250
MAY 24 . . . 1971	4.4	.030	--	.100	--	--	--	.120	.052
OCT 18 . . .	6.3	.020	--	.010	.50	--	--	.160	.090
OCT 23 . . . 1972	4.9	.030	--	.050	.41	--	--	.190	.160
OCT 09 . . . 1973	5.4	--	--	.100	.30	.40	--	.210	.190
OCT 30 . . . 1974	4.3	--	--	.050	.59	.64	--	.100	.090
NOV 12 . . . 1975	5.3	--	--	.020	.72	.74	--	.110	.080
NOV 01 . . . 1976	4.1	.020	4.1	.050	.45	.50	4.6	.090	.050
NOV 02 . . . 1977	4.6	.050	4.6	.090	.34	.43	5.0	.130	.100
OCT 26 . . . 1978	5.3	.050	5.3	.090	.12	.21	5.5	.140	.110
NOV 07 . . . 1979	--	--	5.9	.020	.97	.99	6.9	.140	--
NOV 13 . . . 1980	5.5	.030	5.5	.090	.51	.60	6.1	.160	.130

## 01578345 - EAST BRANCH OCTORARO CREEK AT STEELVILLE, PA--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
JUN , 1970	--	<200	--	<500	--	--	--	<250	--	--
08...	--	<200	--	<500	--	--	--	<250	--	--
NOV 03...	--	<100	--	<900	--	<250	--	<100	--	--
MAY , 1971	--	<150	--	<200	--	<250	--	230	--	--
24...	--	<100	--	<200	--	<250	--	<150	--	--
OCT 18...	--	<100	--	<200	--	<250	--	260	--	--
OCT , 1972	--	<100	--	<200	--	<250	--	--	--	--
23...	--	<100	--	<200	--	<250	--	--	--	--
OCT , 1973	ND	--	ND	--	ND	--	<20	120	--	<2
09...	ND	--	ND	--	ND	--	<20	--	80	ND
OCT , 1974	ND	--	ND	--	ND	--	<20	--	80	5
30...	<2	--	ND	--	ND	--	ND	--	50	<2
NOV , 1975	<2	--	ND	--	ND	--	<20	--	80	<2
12...	<2	--	<20	--	ND	--	<20	--	100	3
NOV , 1976	<2	--	ND	--	ND	--	<2	--	110	2
01...	ND	--	ND	--	ND	--	3	--	--	--
OCT , 1978	ND	--	ND	--	ND	--	--	--	--	--
26...	<2	--	ND	--	ND	--	0	--	--	--
NOV , 1979	--	100	--	--	--	--	--	--	--	--
07...	--	100	--	--	--	--	--	--	--	--
NOV , 1980	1	--	.00	--	1	--	3	--	60	2
13...	1	--	.00	--	1	--	3	--	60	2

DATE	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
JUN , 1970	<100	<250	--	<250	--	<250	--	--	24	1.8
08...	<100	<250	--	<250	--	<250	--	--	24	1.8
NOV 03...	<500	<250	--	<250	--	<20	--	--	--	--
MAY , 1971	<50	<250	--	<250	--	<20	--	--	14	1.5
24...	<50	<250	--	<250	--	<50	--	--	3	.29
OCT 18...	<50	<250	--	<250	--	<20	--	--	--	--
OCT , 1972	<50	<250	--	<250	--	<20	--	--	--	--
23...	--	<10	--	--	ND	--	20	--	--	--
OCT , 1973	--	--	<10	--	<2	--	<20	--	--	--
09...	--	--	40	--	2	--	<20	--	--	--
OCT , 1974	--	--	40	--	4	--	<20	--	--	--
30...	--	--	<10	--	ND	--	ND	.10	--	--
NOV , 1975	--	--	20	--	<2	--	ND	.10	--	--
12...	--	--	--	--	--	10	--	--	--	--
NOV , 1976	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
NOV , 1977	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--
OCT , 1978	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
NOV , 1979	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
NOV , 1980	--	--	40	--	1	--	3	.00	--	--
13...	--	--	40	--	1	--	3	.00	--	--

Table 3.--Benthic-invertebrate data  
[double dash indicates organism not present in sample]

DATE TIME	01472054 PIGEON CREEK NEAR BUCKTOWN, PA.					
	MAY 6, 70 0000	SEP 29, 70 0000	MAY 4, 71 0000	SEP 28, 71 0000	OCT 9, 72 0000	OCT 3, 73 0000
TOTAL COUNT	110	94	186	26	288	486
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	5
CRUSTACEA						
..ISOPODA						
..ASELLIDAE						
..ASELLUS	--	--	--	--	--	1
INSECTA						
..COLEOPTERA						
..ELMIDAE						
..DUBIRAPHIA	--	--	--	--	--	--
..OPTIOSEVUS	--	--	--	--	1	14
..STENOXYTUS	--	--	--	--	2	10
..PSAPPENTIDAE	--	--	--	--	--	--
..ECTOPRIA	--	--	--	--	--	1
..PSEPHENUS	--	--	--	--	--	--
..COLLEMBOLA	--	--	--	--	--	1
DIPTERA						
..CHIRONOMIDAE	14	--	33	--	14	10
..BRILLIA	--	--	--	--	--	--
..CARDIOCLADIUS	--	--	--	--	--	--
..CONCHAPELOPIA	--	--	--	--	--	--
..CRICOTOPIUS	--	--	--	--	--	--
..EUKIEFFERIELLA	--	--	--	--	--	--
..LIMNOCHIRONOMUS	--	--	--	--	--	--
..MICROTENDIPES	--	--	--	--	--	--
..ORTHOCCLADIUS	--	--	--	--	--	--
..PARAMETRICNEMUS	--	--	--	--	--	--
..RHEOTANTARSUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	--	--
..EMPIDIDAE	--	--	--	--	--	--
..HEMERODROMIA	--	--	--	--	--	--
..MUSCIDAE	--	--	--	--	1	--
..SIMULIDAE	--	--	--	--	--	--
..SIMULIUM	--	6	4	10	--	1
..UNKNOWN GENUS	--	--	--	--	--	--
..TIPULIDAE	--	--	--	--	--	--
..ANTOCHA	--	--	8	--	2	16
..TIPULA	--	--	--	--	--	2
EPHEMEROPTERA						
..BAETIDAE	--	--	--	--	--	--
..BAETIS	--	28	--	5	3	4
..PSEUDOCLOEON	--	--	--	--	--	--
..CAENIDAE	--	--	--	--	--	--
..CAENIS	--	--	--	--	--	--
..EPHEMERELLIDAE	--	--	--	--	--	--
..EPHEMERELLA	54	--	93	--	3	6
..HEPTAGENIIDAE	--	--	--	--	--	--
..EPEORUS	1	--	--	--	--	--
..STENONEMA	8	11	3	4	75	22
..SIPHONURIDAE	--	--	--	--	--	--
..ISONYCHIA	--	--	--	--	12	--
..TRICORYTHIDAE	--	--	--	--	--	--
..TRICORYTHODES	--	--	--	--	--	--
MEGALOPTERA						
..CORYDALIDAE	--	--	--	--	--	--
..CHAULIOIDES	--	--	--	--	--	--
..CORYDALUS	--	--	--	--	--	--
..NIGRONIA	--	--	--	--	--	--
PLECOPTERA						
..PERLIDAE	--	--	--	--	--	--
..ACRONEURIA	--	--	--	--	2	--
..PERLODIDAE	--	--	--	--	--	2
..TAENIOPTERYGIDAE	--	--	--	--	--	--
..TAENIOPTERYX	--	--	--	--	--	--
..TRICHOPTERA						
..GLOSSOSOMATIDAE	--	--	--	--	--	--
..GLOSSOSOMA	--	--	--	--	2	22
..HYDROPSYCHIDAE	--	--	--	--	--	--
..CHEUMATOPSYCHE	19	9	19	--	72	78
..HYDROPSYCHE	13	25	26	7	89	271
..SYMPHITOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE	--	--	--	--	--	--
..LEUCOTRICHIA	--	--	--	--	--	3
..LIMNephilidae	--	--	--	--	--	--
..GOERA	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..MOLANNIDAE	--	--	--	--	--	--
..MOLANNA	1	--	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--	9	14
..CHIMARRA	--	--	--	--	1	3
..DOLOPHILODES	--	--	--	--	--	--
..WORMALDIA	--	--	--	--	--	--
..POLYCENTROPODIDAE	--	--	--	--	--	--
..POLYCENTROPUS	--	--	--	--	--	--
..PSYCHOPHYIIDAE	--	--	--	--	--	--
..PSYCHOMYIA	--	15	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..BIVALVIA						
..NUCULOIDEA						
..SPHAERIIDAE						
..UNKNOWN GENUS	--	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--

01472054 PIGEON CREEK NEAR BUCKTOWN, PA.					
DATE	OCT 26 76	OCT 20 77	OCT 31 78	NOV 8 79	NOV 5 80
TIME	1230	1600	1530	1515	1345
TOTAL COUNT	554	125	39	117	440
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	4	--	--	--	--
..CRUSTACEA					
..ISOPODA					
...ASELLIDAE					
...ASELLUS	--	--	--	--	--
..INSECTA					
..COLEOPTERA					
...ELMIDAE					
...DUBIRAPHIA	6	--	--	--	--
...OPTIOSERVUS	15	--	--	6	--
...STENELMIS	9	10	--	5	--
...PSEPHIDAE					
...ECTOPRIA	--	1	--	--	--
...PSEPHENUS	--	--	--	1	--
..COLLEMBOLA	--	--	--	--	--
..DIPTEHA					
...CHIRONOMIDAE	--	--	--	--	--
...BRILLIA	--	1	--	--	--
...CARDIOCLADIUS	3	--	--	--	--
...CONCHAPELOPIA	1	--	--	2	--
...CRICOTOPIUS	--	9	--	17	5
...EUKIEFFERIELLA	--	--	1	2	1
...LIMNOCHIRONOMUS	--	--	--	1	--
...MICROTENDIPES	--	--	--	1	--
...ORTHOCCLADIUS	12	--	4	--	1
...PARAMETRIOCNEMUS	--	--	--	1	--
...RHEOTANYTARSUS	11	--	--	2	1
...RHINEMANNIELLA	2	--	--	--	--
..EMPIDIDAE					
...HEMERODROMIA	1	--	--	--	--
..MUSCIDAE					
...SIMULIIDAE					
...SIMULIUM	12	--	1	--	8
...UNKNOWN GENUS	--	1	--	--	--
..TIPULIDAE					
...ANTOCHA	52	15	--	33	8
..TIPULA	--	--	--	--	--
..EPHEMEROPTERA					
...BAETIDAE					
...BAETIS	3	--	1	--	--
...PSEUDOCLOEON	--	--	--	1	--
..CAENIDAE					
...CAENIS	--	3	--	--	--
..EPHEMERELLIDAE					
...EPHEMERELLA	55	--	--	1	--
..HEPTAGENIIDAE					
...EPEORUS	--	--	--	--	--
...STENONEMA	46	1	1	3	24
..SIPULONURIDAE					
...ISONYCHIA	--	--	--	--	8
..TRICORYTHIDAE					
...TRICORYTHODES	1	--	--	--	--
..MEGALOPTERA					
...CORDALIDAE	--	--	--	--	8
...CHAULIODES	--	1	--	--	--
...CORYDALUS	1	--	--	--	--
..NIGRONIA					
..PLECOPTERA					
...PERLIDAE					
...ACRONURIA	1	2	--	--	--
..PERLODIDAE					
...TAENIOPTERYGIDAE	--	--	--	4	--
..TRICHOPTERA					
...GLOSSOSOMATIDAE					
...GLOSSOSOMA	19	--	3	--	--
..HYDROPSYCHIDAE					
...CHEUMATOPSYCHE	87	3	--	24	88
..HYDROPSYCHE					
...SYMPHITOPSYCHE	209	77	26	9	284
..HYDROPTILIDAE				4	--
...LEUCOTRICHIA	--	--	--	--	--
..LIMNephilidae					
...GOERA	--	--	--	--	--
...UNKNOWN GENUS	2	--	--	1	--
..MOLANNIDAE					
...MOLANNA	--	--	--	--	--
..PHILOPOTAMIDAE					
...CHIMARRA	19	--	--	--	24
...DOLOPHILODES	--	--	--	--	--
..WORMALDIA	2	--	--	--	--
..POLYCENTROPODIDAE					
...POLYCENTROPUS	--	--	--	1	--
..PSYCHOMYIIDAE					
...PSYCHOMYIA	--	--	--	--	--
MOLLUSCA (MOLLUSCS)					
..BIVALVIA					
...NUCULOIDEA					
...SPHAERIIDAE					
...UNKNOWN GENUS	--	1	--	--	--
PLATYHELMINTHES (FLATWORMS)					
..TURBELLARIA					
...TRICLADIDA					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	1	--	--	--	--

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

01472065 PIGEON CREEK AT PORTERS MILL, PA.

DATE TIME	MAY 5 70 0000	SEP 29 70 0000	MAY 4 71 0000	SEP 28 71 0000	OCT 9 72 0000	OCT 3 73 0000
TOTAL COUNT	115	132	31	37	125	361
ORGANISM COUNT	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
INSECTA						
..COLEOPTERA						
..DRYOPIDAE	--	--	--	--	--	--
..HELICUS						
..ELMIDAE	--	--	--	--	--	--
..ANCYRONYX	--	--	--	--	--	--
..OPTIOSERVUS	--	--	--	--	1	4
..OULIMNIUS	--	--	--	--	--	1
..STENELMIS	--	--	--	--	--	1
..PSEPHENIDAE	--	--	--	--	--	1
..PSEPHENUS	--	--	--	--	--	--
..PTILODACTYLIDAE	--	--	--	--	--	--
..ANCHYTARSUS	--	--	--	--	--	--
..COLEMBOLA	--	--	--	--	--	4
..ENTOMOBRYIDAE	--	--	--	--	--	--
..DIPTERA						
..ATHERICIDAE=RHAGIONIDAE						1
..ATHERIX	--	--	--	--	--	2
..CHIRONOMIDAE	21	--	8	--	59	--
..CRICOTOPUS	--	--	--	--	--	--
..EUKIEFFERIELLA	--	--	--	--	--	--
..MICROTENDIPES	--	--	--	--	--	--
..NANOCLADIUS	--	--	--	--	--	--
..POLYPEDILUM	--	--	--	--	--	--
..POTTHASTIA	--	--	--	--	--	--
..PSEUDODIAMESA	--	--	--	--	--	--
..RHEOTANYTARSUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	--	--
..EMPIDIDAE	--	--	--	--	--	--
..HEMERODROMIA	--	--	--	--	--	--
..SIMULIIDAE	--	1	--	16	--	--
..SIMULIUM	--	--	--	--	--	--
..TIPULIDAE	1	--	3	--	1	3
..ANTOCHA	--	--	--	--	--	--
..TIPULA	--	--	--	--	--	--
..EPHEMEROPTERA						
..BAETIDAE	--	26	--	2	20	17
..BAETIS	--	--	--	--	--	--
..EPHEMERELLIDAE	42	--	6	--	3	1
..EPHEMERELLA	--	--	--	--	--	--
..HEPTAGENIIDAE	4	24	3	6	12	20
..STENONEMA	--	--	--	--	--	--
..SIPHONURIDAE	--	--	--	--	--	2
..ISONYCHIA	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
HEMIPTERA						
..SALIDAE	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
PLECOPTERA						
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..NEOURIDAE	--	--	--	--	--	--
..AMPHINEMURA	--	--	--	--	--	--
..PELTOPERLIDAE	--	--	--	--	--	--
..PELTOPERLA	--	--	--	--	--	--
..PERLIDAE	--	--	--	--	--	--
..ACHONETIA	--	--	--	--	--	--
..PARAGNETINA	--	--	--	--	--	--
..TAENIOPTERYGIDAE	--	--	--	--	--	--
..TAENIOPTERYX	--	--	--	--	--	--
TRICHOPTERA						
..BRACHYCENTRIDAE	--	--	--	--	--	--
..BRACHYCENTRUS	--	--	--	--	--	--
..MICRASEMA	--	--	--	--	--	--
..GLOSSOSOMATIDAE	--	--	--	--	--	10
..GLOSSOSOMA	--	--	--	--	--	--
..HYDROPSYCHIDAE	4	24	1	--	11	86
..CHEUMATOPSYCHE	--	--	--	--	--	198
..HYDROPSYCHE	43	29	10	13	4	--
..SYMPHITOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE	--	--	--	--	--	--
..LEUCOTRICHIA	--	--	--	--	--	--
..OCHROTRICHIA	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..LEPTOCERIDAE	--	--	--	--	--	--
..OECETIS	--	--	--	--	--	--
..LIMNIPHILIDAE	--	--	--	--	--	--
..GOERA	--	--	--	--	--	--
..MOLANNIDAE	--	8	--	--	--	--
..MOLANNA	--	--	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--	--	11
..CHIMARRA	--	--	--	--	14	--
..DOLOPHILODES	--	--	--	--	--	--
..PHRYGANEIDAE	--	--	--	--	--	--
..OLIGOSTOMIS	--	--	--	--	--	--
..POLYCENTROPIDAE	--	--	--	--	--	--
..POLYCENTROPUS	--	--	--	--	--	--
..PSYCHOMYIIDAE	--	20	--	--	--	--
..PSYCHOMYIA	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE	--	--	--	--	--	--
..FERRISSIA	--	--	--	--	--	--
..LYMNAEIDAE	--	--	--	--	--	--
..LYMNAEA	--	--	--	--	--	--

		01472065 PIGEON CREEK AT PORTERS MILL, PA.					
DATE	OCT 24, 74	OCT 26, 76	OCT 20, 77	OCT 31, 78	NOV 8, 79	NOV 5, 80	
TIME	0000	1430	1500	1445	1615	1500	
TOTAL COUNT	131	579	42	110	290	254	
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT	
ARTHROPODA (ARTHROPODS)							
..ARACHNIDA							
..HYDRACARINA							
..UNKNOWN FAMILY							
..UNKNOWN GENUS	--	14	--	20	--	--	
..INSECTA							
..COLEOPTERA							
..DRYOPIDAE							
..HELICUS	--	--	--	--	2	--	
..ELMIDAE							
..ANCYRONYX	--	1	--	--	--	--	
..OPTIOSERVUS	3	8	--	--	--	4	
..OULIMNIUS	--	1	--	--	--	--	
..STENELMIS	--	--	--	--	1	--	
..PSEPHENIDAE							
..ECTOPHIA	1	2	1	--	--	4	
..PSEPHENUS	--	--	--	--	1	--	
..PTILODACTYLIDAE							
..ANCHYTARSUS	--	1	--	--	--	--	
..COLLEMBOLA							
..ENTOMOBRYIDAE	--	--	--	--	--	--	
..DIPTERA							
..ATHERICIDAE=RHAGIONIDAE					2	--	
..ATHERIX	--	--	--	--	--	--	
..CHIRONOMIDAE	4	--	--	--	--	--	
..CRICOTOPUS	--	59	--	8	67	24	
..EUKIEFFERIELLA	--	--	--	2	--	2	
..MICROTENDIPES	--	--	--	--	--	4	
..NANOCCLADIUS	--	--	--	--	--	--	
..POLYPEDILUM	--	--	--	2	--	--	
..POTTHASTIA	--	2	--	--	--	--	
..PSEUDODIAMESA	--	--	--	--	1	--	
..RHEOTANYTARSUS	--	--	--	2	--	--	
..THIENEMANNIELLA	--	162	--	--	--	8	
..EMPIDIDAE							
..HEMERODROMIA	--	1	--	--	--	--	
..SIMULIIDAE							
..SIMULIUM	--	3	--	1	1	--	
..TIPULIDAE							
..ANTOCHA	4	4	--	3	22	32	
..TIPULA	--	--	--	--	2	--	
..EPHEMEROPTERA							
..BAETIDAE							
..BAETIS	--	--	3	--	3	--	
..EPHEMERELLIDAE							
..EPHEMERELLA	4	7	--	6	--	--	
..HEPTAGENIIDAE							
..STENONEMA	7	35	2	16	30	44	
..SIPHONURIDAE							
..ISONYCHIA	--	--	--	--	1	12	
..UNKNOWN GENUS	2	2	--	1	--	--	
..HEMIPTERA							
..SALDIDAE							
..UNKNOWN GENUS	--	--	--	--	1	--	
..PLECOPTERA							
..UNKNOWN FAMILY							
..UNKNOWN GENUS	--	--	--	1	--	--	
..NEMOURIDAE							
..AMPHINEMURA	--	--	--	--	1	--	
..PELTOPERLLIDAE	--	--	--	--	1	--	
..PELTOPERLA							
..PERLIDAE							
..ACRONEURIA	--	--	--	--	2	--	
..PARAGNETINA	--	--	--	--	2	--	
..TAENIOPTERYGIDAE							
..TAENIOPTERYX	--	1	--	--	--	--	
..TRICHOPTERA							
..BRACHYCENTRIDAE							
..BRACHYCENTRUS	1	2	--	--	--	8	
..MICRASEMA	--	--	--	1	--	--	
..GLOSSOSOMATIDAE							
..GLOSSOSOMA	--	3	--	--	--	--	
..HYDROPSYCHIDAE							
..CHEUMATOPSYCHE	5	84	13	23	33	32	
..HYDROPSYCHE	91	147	8	1	101	68	
..SYMPHITOPSYCHIDAE	--	--	--	19	14	--	
..HYDROPTILIDAE							
..LEUCOTRICHIA	--	--	--	--	--	2	
..OCHROTRICHIA	--	6	--	--	--	--	
..UNKNOWN GENUS	--	--	4	--	--	--	
..LEPTOCERIDAE							
..OBCETIS	--	2	--	--	--	--	
..LIMNephilidae							
..GOERA	--	--	--	1	--	--	
..MOLANNIDAE							
..MOLANNA	--	--	--	--	--	--	
..PHILOPOTAMIDAE							
..CHIMARRA	9	32	--	1	--	6	
..DOLOPHILODES	--	--	--	--	--	--	
..PHRYGANEIDAE							
..OLIGOSTOMIS	--	--	--	--	1	--	
..POLYCENTROPIDAE							
..POLYCENTROPUS	--	--	--	2	--	--	
..PSYCHOMYIIDAE							
..PSYCHOMYIA	--	--	--	--	--	--	
MOLLUSCA (MOLLUSCS)							
..GASTROPODA							
..BASOMMATOPHORA							
..ANCYLIDAE							
..FERRISSIA	--	--	--	--	1	--	
..LYMNAEIDAE							
..LYMNAEA	--	--	11	--	--	--	

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	01472080		PIGEON CREEK NEAR PARKER FORD, PA.			
	MAY 6, 70 0000	SEP 29, 70 0000	MAY 4, 71 0000	SEP 28, 71 0000	OCT 9, 72 0000	NOV 5, 75 1345
TOTAL COUNT	48	104	105	24	548	767
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..PROSOPORA						
..LUMBRICULIDAE						
..LUMBRICULUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	4
..INSECTA						
..COLEOPTERA						
..DRYOPTIDAE						
..HELICUS	--	--	--	--	--	--
..ELMIDAE						
..DUBIAPHIA	--	--	--	--	--	--
..OPTIOSERVUS	--	--	--	--	--	17
..OULIMNIUS	--	--	--	--	--	--
..PROMOREZIA	--	--	--	--	--	--
..STENELMIS	--	--	--	--	1	4
..PSEPHENIDAE	--	--	--	--	--	--
..ECTOPHIL	--	--	--	--	1	--
..PSEPHENUS	--	--	1	--	--	--
..DIPTERA						
..ATHERICIDAE=RHAGIONIDAE						
..ATHERIX	--	--	--	--	1	--
..CHIRONOMIDAE	16	1	6	--	15	--
..ABLABESMYIA	--	--	--	--	--	5
..CARDIOCLADIUS	--	--	--	--	--	33
..CONCHAELOPIA	--	--	--	--	--	--
..CRICOTOPUS	--	--	--	--	--	18
..DIAMEMA	--	--	--	--	--	5
..EUKIEFFERIELLA	--	--	--	--	--	--
..MICROTENDIPES	--	--	--	--	--	33
..ORTHOCCLADIUS	--	--	--	--	--	--
..POLYPEDILUM	--	--	--	--	--	--
..PSECTROCLADIUS	--	--	--	--	--	22
..RHEOTANTARSUS	--	--	--	--	--	--
..TANTARSUS	--	--	--	--	--	11
..THIENEMANNIELLA	--	--	--	--	--	--
..EMPIDIDAE	--	--	--	--	4	1
..HEMEROPTOMIA	--	--	--	--	--	--
..SIMULIIDAE	--	--	6	11	--	12
..SIMULIUM	--	--	--	--	--	--
..TIPULIDAE	--	--	--	--	--	--
..ANTOCHA	3	--	--	--	7	54
..UNKNOWN GENUS	--	--	--	--	--	--
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	--	27	--	--	6	--
..PSEUDOCLOEON	--	--	--	--	--	3
..CAENIDAE						
..CAENIS	--	--	--	--	--	--
..EPHEMERELLIDAE						
..EPHEMERELLA	9	--	27	2	4	95
..HEPTAGENIIDAE						
..STENONEMA	--	18	1	4	23	16
..SIPHONURIDAE	--	--	--	--	6	1
..ISONYCHIA	--	--	--	--	--	--
..MEGALOPTERA						
..CORYDALIDAE						
..CHAULIODES	--	--	--	--	--	--
..CORYDALUS	--	--	--	--	--	1
..C. CORNUTUS	--	--	--	--	--	--
..SIALIDAE						
..SIALIS	--	--	--	--	--	--
..PLECOPTERA						
..PERLIDAE						
..ACRONURIA	2	4	--	--	--	--
..PARAGNETINA	--	--	--	--	8	3
..TAENIOPTERYGIDAE	--	--	--	--	--	1
..TAENIOPTERYX	--	--	--	--	--	--
..TRICHOPTERA						
..BRACHYCENTRIDAE	--	--	--	--	--	--
..MICRASEMA	--	--	--	--	--	--
..GLOSSOSOMATIDAE	--	--	2	--	--	11
..GLOSSOSOMA	--	--	--	--	--	--
..HYDROPSYCHIDAE	1	10	15	--	83	111
..CHEUMATOPSYCHE	17	25	45	7	343	236
..HYDROPSYCHE	--	--	--	--	--	--
..SYMPHITOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE						
..HYDROPTILA	--	--	--	--	--	--
..LEUCOTRICHIA	--	--	--	--	1	6
..OCHROTRICHIA	--	--	--	--	--	--
..LEPTOCERIDAE	--	--	--	--	--	--
..NECTOPSYCHE	--	--	--	--	--	--
..LIMNIPHILIDAE	--	--	--	--	--	--
..GOERA	--	--	--	--	--	--
..MOLANNIDAE	--	--	--	--	--	--
..MOLANNA	--	8	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--	--	--
..CHIMARRA	--	--	--	--	45	66
..POLYCENTROPIDAE	--	--	--	--	--	--
..POLYCENTROPUS	--	--	--	--	--	--
..PSYCHOMYIIDAE	--	11	2	--	--	--
..PSYCHOMYIA	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA	--	--	--	--	--	--
..PHYSIDAE	--	--	--	--	--	--
..PHYSA	--	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--

01472080 PIGEON CREEK NEAR PARKER FORD, PA.					
DATE	OCT 26, 78	OCT 20, 77	OCT 31, 78	NOV 14, 79	NOV 5, 80
TIME	0915	1400	1400	0930	1630
TOTAL COUNT	880	344	120	32	620
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA					
..OLIGOCHAETA					
..PROSOPORA					
..LUMBRICULIDAE					
..LUMBRICULUS	--	--	--	2	--
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	5	--	1	--	--
..INSECTA					
..COLEOPTERA					
..DRYOPIDAE					
..HELICHUS	--	1	1	--	--
..ELMIDAE	--	1	--	--	--
..DUBIRAPHIA	--	1	--	--	--
..OPTIOSERVUS	17	10	1	--	--
..OULIMNIUS	3	--	--	--	--
..PROMOREZIA	--	1	--	--	--
..STENELMIS	4	--	--	1	8
..PSEPHENIDAE					
..ECTOPRIA	1	--	--	--	--
..PSEPHENUS	--	--	--	--	4
..DIPTERA					
..ATHERICIDAE=RHAGIONIDAE					
..ATHERIX	--	--	--	--	--
..CHIRONOMIDAE	--	--	--	--	--
..ABLABESMYIA	--	--	--	--	--
..CARDIOCLADIUS	2	--	--	--	--
..CONCHAPLOPIA	11	2	--	--	4
..CRICOTOPUS	24	--	--	--	40
..DIAMESA	--	--	--	--	--
..EUKIEFFERIELLA	--	1	--	--	16
..MICROTENDIPES	--	5	--	--	32
..ORTHOCLADIUS	18	18	6	1	28
..POLYPEDILLUM	3	--	1	--	--
..PSECTROCLADIUS	5	--	--	--	--
..RHEOTANYTARSUS	19	1	3	--	12
..TANYTARSUS	--	--	--	--	12
..THIEMANNIELLA	9	--	2	--	8
..EMPIDIDAE	--	--	--	--	--
..HEMERODROMIA	1	1	--	--	12
..SIMULIIDAE					
..SIMULIUM	6	1	1	--	12
..TIPULIDAE					
..ANTOCHAE	34	--	3	--	104
..UNKNOWN GENUS	--	1	--	--	--
..EPHEMEROPTERA					
..BAETIDAE	--	1	--	--	--
..BAETIS	1	1	--	--	--
..PSEUDOCLOEON					
..CAENIDAE	--	1	--	--	--
..CAENIS	--	1	--	--	--
..EPHEMERELLIDAE					
..EPHEMERELLA	10	29	--	--	--
..HEPTAGENIIDAE					
..STENONEMA	11	12	4	12	16
..SIPHONURIDAE					
..ISONYCHIA	4	1	--	1	24
..MEGALOPTERA					
..CORYDALIDAE	--	--	--	--	2
..CHAULIOIDES	4	--	--	--	--
..CORYDALUS	--	1	--	--	--
..C.CORNUTUS	--	1	--	--	--
..SIALIDAE					
..SIALIS	--	1	--	--	--
..PLECOPTERA					
..PERLIDAE					
..ACRONEURIA	--	2	1	--	--
..PARAGNETINA	5	11	--	--	8
..TARNOPTERIGIDAE					
..TARNOPTERYX	2	6	1	--	36
..TRICHOPTERA					
..BRACHYCENTRIDAE					
..MICRASEMA	4	--	--	--	24
..GLOSSOSOMATIDAE					
..GLOSSOSOMA	--	--	10	--	12
..HYDROPSYCHIDAE					
..CHEUMATOPSYCHE	253	100	13	2	96
..HYDROPSYCHE	322	100	14	8	88
..SYMPHITOPSYCHE	--	--	24	3	--
..HYDROPTILIDAE					
..HYDROPTILA	--	6	--	--	4
..LEUCOTRICHIA	10	1	--	--	12
..OCHROTRICHIA	3	--	--	--	--
..LEPTOCERIDAE					
..NECTOPSYCHE	--	--	--	--	4
..LIMNAPHILIDAE					
..GOERA	1	2	--	--	--
..MOLANNIDAE					
..MOLANNA	--	--	--	--	--
..PHILOPOTAMIDAE					
..CHIMARRA	78	29	33	1	2
..POLYCENTROPODIDAE					
..POLYCENTROPUS	4	--	--	--	--
..PSYCHOMYIIDAE					
..PSYCHOMYIA	--	--	--	--	--
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
..BASOMMATOPHORA					
..ANCYLIDAE	--	--	--	1	--
..FERUSIA					
..PHYSIDAE	--	2	--	--	--
..PHYSA					
PLATYHELMINTHES (FLATWORMS)					
..TURBELLARIA					
..TRICLADIDA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	1	--	--	--	--



Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

	01472109 STONY RUN NEAR SPRING CITY, PA.					
DATE	SEP 29, 70	MAY 4, 71	SEP 28, 71	OCT 9, 72	OCT 2, 73	DEC 24, 74
TIME	0000	0000	0000	0000	0000	0000
TOTAL COUNT	124	61	30	508	391	177
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..HIRUDINEA						
...UNKNOWN ORDER						
...UNKNOWN FAMILY						
...UNKNOWN GENUS	--	--	--	--	--	--
..OLIGOCHAETA						
..PLESIOPORA						
..TUBIFICIDAE						
...UNKNOWN GENUS	--	--	--	--	--	--
...UNKNOWN ORDER						
...UNKNOWN FAMILY						
...UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..CRUSTACEA						
...AMPHIPODA						
...GAMMARIDAE						
...GAMMARUS						
...ISOPODA						
...ASELLIDAE						
...ASELLUS	--	--	--	--	--	1
..INSECTA						
...COLEOPTERA						
...DRYOPIDAE						
...HELICHUS	--	--	--	--	--	--
...ELMIDAE						
...OPTIOSERVUS	--	--	--	--	--	--
...STENELMIS				5	2	3
...HYDROPHILIDAE						
...HYDROBIUS	--	--	--	--	--	--
...PSEPHENIDAE						
...ECTOPRIA	--	--	--	--	--	--
...ECTOPRIA NERVOSA	--	--	--	--	--	--
...PSEPHENUS	--	--	--	--	--	--
..DIPTERA						
...CHIRONOMIDAE	--	35	--	16	--	29
...CHIRONOMUS	--	--	--	--	--	--
...CONCHAPELOPIA	--	--	--	--	--	--
...CORYNONEURA	--	--	--	--	--	--
...CRICOTOPUS	--	--	--	--	--	--
...CRYPTOCHIRONOMUS	--	--	--	--	--	--
...EUKIEFFERIELLA	--	--	--	--	--	--
...LIMNOCHIRONOMUS	--	--	--	--	--	--
...MICROPSECTRA	--	--	--	--	--	--
...MICROTENDIPES	--	--	--	--	--	--
...ORTHOCLADIUS	--	--	--	--	--	--
...PARAMETRICNEMUS	--	--	--	--	--	--
...PARATANYTARSUS	--	--	--	--	--	--
...POLYPEDILUM	--	--	--	--	--	--
...RHEOTANYTARSUS	--	--	--	--	--	--
...TANYTARSUS	--	--	--	--	--	--
...THIENEMANNIELLA	--	--	--	--	--	--
...EMPIDIDAE				2		
...SIMULIIDAE						
...SIMULIUM	92	8	21	7	--	3
...TIPULIDAE	--	--	--	3	--	3
...ANTOCHA	--	--	--	--	--	--
...TIPULA						
..EPHEMEROPTERA						
...BAETIDAE						
...BAETIS	--	--	--	3	2	--
...CAENIDAE	--	--	--	--	--	--
...CAENIS	--	--	--	--	--	--
...EPHEMERELLIDAE						
...EPHEMERELLA	--	--	--	--	1	--
...HEPTAGENIIDAE	--	--	--	--		
...STENOEMA	--	--	--	35	6	--
...SIPHONURIDAE	--	--	--	--	--	--
...ISONYCHIA	--	--	--	2	--	--
...SIPHONURUS	--	--	--	--	--	--
..HEMIPTERA						
...VELIIDAE						
...RHAGOVIELIA	--	--	--	--	--	--
..ODONATA						
...COENAGRIONIDAE	--	--	--	--	--	--
...ENALLAGMA						
..PLECOPTERA						
...PERLIDAE						
...PARAGNETINA	--	--	--	--	--	--
..TRICHOPTERA						
...HYDROPSYCHIDAE						
...CHEUMATOPSYCHE	--	10	--	97	67	41
...HYDROPSYCHE	32	8	9	334	313	95
...POTAMYIA	--	--	--	--	--	--
...SYMPHITOPSYCHE	--	--	--	--	--	--
...HYDROPTILIDAE	--	--	--	--	--	--
...HYDROPTILA	--	--	--	--	--	--
...OGROPTILIDAE	--	--	--	--	--	--
...PHILOPOTAMIDAE	--	--	--	--	--	--
...CHIMARRA	--	--	--	1	--	2
...PSYCHOMYIIDAE	--	--	--	--	--	--
...PSYCHOMYIA	--	--	--	--	--	--
...UNKNOWN FAMILY	--	--	--	3	--	--
...UNKNOWN GENUS	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
...BASOMMATOPHORA						
...ANCYLIDAE						
...FERRISSIA	--	--	--	--	--	--
...PHYSIDAE	--	--	--	--	--	--
...PHYSA	--	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
...TURBELLARIA						
...TRICLADIDA						
...UNKNOWN FAMILY	--	--	--	--	--	--
...UNKNOWN GENUS	--	--	--	--	--	--

	01472109		STONY RUN NEAR SPRING CITY, PA.		
DATE	OCT 28, 78	OCT 20, 77	OCT 31, 78	NOV 9, 79	NOV 5, 80
TIME	1000	1130	1115	1115	1130
TOTAL COUNT	285	34	158	132	272
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA					
..HIRUDINEA					
...UNKNOWN ORDER					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	4	--	--	--	--
..OLIGOCHAETA					
...PLESIOPORA					
...TUBIFICIDAE					
...UNKNOWN GENUS	1	--	--	--	--
...UNKNOWN ORDER					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	--	--	--	--	5
ARTHROPODA (ARTHROPODS)					
..CRUSTACEA					
...AMPHIPODA					
...GAMMARIDAE					
...GAMMARUS	1	--	--	--	--
...ISOPODA					
...ASELLIDAE					
...ASELLUS	2	1	--	--	--
..INSECTA					
...COLEOPTERA					
...DRYOPIDAE					
...HELICHUS	--	--	--	--	2
...ELMIDAE					
...OPTIOSERVUS	8	--	--	--	--
...STENELMIS	25	2	--	--	2
...HYDROPHILIDAE					
...HYDROBIUS	1	--	--	--	--
...PSEPHENIDAE					
...ECTOPRIA	1	1	--	--	--
...ECTOPRIA NERVOSA	--	--	1	--	--
...PSEPHENUS	3	--	--	--	--
..DIPTERA					
...CHIRONOMIDAE	--	--	--	--	--
...CHIRONOMUS	--	--	--	--	1
...CONCHAPELOPIA	9	--	1	3	17
...CORYNONEURA	2	--	--	--	--
...CRICOTOPUS	18	--	1	--	--
...CRYPTOCHIRONOMUS	--	--	1	--	3
...EUKIEFFERIELLA	--	--	1	--	1
...LIMNOCHIRONOMUS	--	--	--	--	9
...MICROPSCTRA	1	--	--	--	--
...MICROTENDIPES	14	--	2	1	88
...ORTHOCLADIUS	--	--	--	30	34
...PARAMETRICNEMUS	--	--	--	--	1
...PARATANYTARSUS	--	--	--	--	6
...POLYPEDILUM	--	--	1	--	1
...RHEOTANYTARSUS	2	--	2	1	3
...TANYTARSUS	--	--	1	1	--
...THIENEMANNIELLA	10	--	--	--	1
...EMPIDIDAE					
...SIMULIIDAE					
...SIMULIUM	36	--	1	1	--
...TIPULIDAE					
...ANTOCHA	1	--	--	3	3
...TIPULA	1	--	--	--	--
..EPHEMEROPTERA					
...BAETIDAE					
...BAETIS	--	--	--	1	1
...CAENIDAE					
...CAENIS	1	1	--	--	2
...EPHEMERELLIDAE					
...EPHEMERELLA	--	--	--	--	--
...HEPTAGENIIDAE					
...STENONEMA	5	--	--	5	5
...SIPHONURIDAE					
...ISONYCHIA	--	--	--	1	--
...SIPHONURUS	--	1	--	--	--
..HEMPTERA					
...VELIIDAE					
...RHAGOVIELIA	1	--	--	--	--
..ODONATA					
...COENAGRIONIDAE					
...ENALLAGMA	--	--	--	--	1
..PLECOPTERA					
...PERLIDAE					
...PARAGNETINA	--	--	--	1	--
..TRICHOPTERA					
...HYDROPSYCHIDAE					
...CHEUMATOPSYCHE	58	2	58	52	24
...HYDROPSYCHE	62	17	88	20	24
...POTAMYIA	--	9	--	--	--
...SYMPHITOPSYPHE	--	--	2	4	--
...HYDROPTILIDAE					
...HYDROPTILA	--	--	--	--	20
...OCHROTRICHIA	1	--	--	--	--
...PHILOPOTAMIDAE					
...CHIMARRA	13	--	1	8	15
...PSYCHOMYIDAE					
...PSYCHOMYIA	4	--	--	--	3
...UNKNOWN FAMILY					
...UNKNOWN GENUS	--	--	--	--	--
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
...BASOMMATOPHORA					
...ANCYLIDAE					
...FERRISSIA	1	--	--	--	--
...PHYSIDAE					
...PHYSA	--	--	--	--	1
PLATYHELMINTHES (FLATWORMS)					
..TURBELLARIA					
...TRICLADIDA					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	1	--	--	--	--

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

	01472110		STONY RUN AT SPRING CITY, PA.			
DATE	MAY 8 70	SEP 28 70	MAY 4 71	SEP 28 71	OCT 9 72	OCT 2 73
TIME	0000	0000	0000	0000	0000	0000
TOTAL COUNT	99	93	112	47	109	13
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
CRUSTACEA						
..AMPHIPODA						
..GAMMARIDAE						
..GAMMARUS	--	--	--	--	--	--
..TALITRIDAE						
..HYALLELLA	--	--	--	--	--	--
..ISOPODA						
..ASELLIDAE						
..ASELLUS	--	--	--	--	--	--
INSECTA						
..COLEOPTERA						
..ELMIDAE						
..DUBIRAPHIA	--	--	--	--	--	--
..OPTIOSERVUS	--	--	--	--	--	--
..STENELMIS	--	--	--	--	2	--
..PSEPHENIDAE						
..ECTOPHIA	--	--	--	--	--	--
..PSEPHENUS	--	--	--	2	--	--
DIPTERA						
..CERATOPOGONIDAE=HELEIDAE						
..UNKNOWN GENUS				--	--	--
..CHIRONOMIDAE	10	--	98	8	24	--
..ABLAUSMYIA	--	--	--	--	--	--
..BRILLIA	--	--	--	--	--	--
..CONCHAPELOPIA	--	--	--	--	--	--
..CORYNOSURA	--	--	--	--	--	--
..CRICOTOPUS	--	--	--	--	--	--
..EUKIEFFERIELLA	--	--	--	--	--	--
..LINNOCHIRONOMUS	--	--	--	--	--	--
..MICROTENDIPES	--	--	--	--	--	--
..ORTHOCALIDUS	--	--	--	--	--	--
..PARACLAUSPELMA	--	--	--	--	--	--
..PARAMETRIOCNEMUS	--	--	--	--	--	--
..PARATANTARSUS	--	--	--	--	--	--
..PHEANOPSECTRA	--	--	--	--	--	--
..POLYPEDILUM	--	--	--	--	--	--
..PSEUDOCHEIRONOMUS	--	--	--	--	--	--
..RECTANTARSUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	--	--
..EMPIDIDAE	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	4	--
..MUSCIDAE	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..SIMULIIDAE	--	--	--	--	--	--
..SIMULIUM	20	--	--	37	--	--
..TIPULIDAE	--	--	--	--	--	--
..ANTOCHA	--	--	--	--	1	--
..DICRANOTA	--	--	--	--	--	--
..TIPULA	--	--	--	--	--	--
EPHEMEROPTERA						
..BAETIDAE	--	6	--	--	4	--
..BAETIS	--	--	--	--	--	--
..CAENIDAE	--	--	--	--	--	--
..CAENIS	--	--	--	--	--	--
..EPHEMERELLIDAE	--	--	--	--	--	--
..EPHEMERELLA	19	--	--	--	1	--
..HEPTAGENIIDAE	--	--	--	--	--	--
..STENACRON	--	--	--	--	--	--
..STENONEMA	14	24	--	--	12	--
..SIPHONURIDAE	--	--	--	--	--	--
..ISONYCHIA	--	--	--	--	--	--
HEMIPTERA						
..CORJALIDAE	--	--	--	--	--	--
..SICALIDAE	--	--	--	--	--	--
MEGALOPTERA						
..CORNYALIDAE	--	--	--	--	--	--
..WIGGONIA	--	--	--	--	--	--
..SIALIDAE	--	--	--	--	--	--
..SIALIS	--	--	--	--	--	--
ODONATA						
..AGRITIDAE	--	--	--	--	--	--
..AGRITON	--	--	--	--	--	--
..COENAGRIONIDAE	--	--	--	--	--	--
..ARGIA	--	1	--	--	--	--
PLECOPTERA						
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..TRICHOPTERA	--	--	--	--	--	--
..HELICOPSYCHIDAE	--	--	--	--	--	--
..HELICOPSYCHE	--	--	--	--	--	--
..HYDROPSYCHIDAE	--	--	--	--	--	--
..CHEUMATOPSYCHE	5	2	8	--	32	--
..HYDROPSYCHE	31	5	4	--	24	--
..POTAMILLA	--	--	--	--	--	--
..SYMPHITOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE	--	--	--	--	--	--
..HYDROPTILA	--	--	--	--	4	--
..LEUCOTRICHIA	--	--	--	--	1	--
..LEUCOTRICHIA	--	--	--	--	--	--
..LUSCIBIDAE	--	--	--	--	--	--
..MYSTAGIDES	--	--	--	--	--	--
..LIMNOCILIDAE	--	--	--	--	--	--
..APATANIA	--	--	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--	--	--
..CHARRA	--	--	--	--	--	--
..DOLOPHILODES	--	--	--	--	--	--
..POLYCENTROPODIDAE	--	--	--	--	--	--
..NEURECLIPSIS	--	--	--	--	--	--
..NYCTIOPHYLAX	--	--	--	--	--	--
..POLYCENTROPUS	--	--	--	--	--	--
..PSYCHOMYIIDAE	--	--	--	--	--	--
..PSYCHOMYIA	--	55	4	--	--	--
MOLLUSCA (MOLLUSCS)						
..BIVALVIA						
..MUCULOIDAE	--	--	--	--	--	--
..SPHAERIIDAE	--	--	--	--	--	--
..SPHAERIUM	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
GASTROPODA						
..BASOMMATOPHORA	--	--	--	--	--	--
..ANCYLIDAE	--	--	--	--	--	--
..FERRISSIA	--	--	--	--	--	--
..LYMNÆIDAE	--	--	--	--	--	--
..LYNNAE	--	--	--	--	--	--
..PHYSIDAE	--	--	--	--	--	--
..PHYSA	--	--	--	--	--	11
..PLANORBIDAE	--	--	--	--	--	--
..HELISOMA	--	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TUBELLARIA	--	--	--	--	--	--
..TRICLADIDA	--	--	--	--	--	--
..PLANARIIDAE	--	--	--	--	--	2
..UNKNOWN GENUS	--	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--

01472110 STONY RUN AT SPRING CITY, PA.						
DATE	OCT 24 74	OCT 25 76	OCT 23 77	OCT 31 78	NOV 9 79	NOV 5 80
TIME	0000	1045	1030	1215	1315	1000
TOTAL COUNT	155	495	200	171	124	850
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	1	--	--	4
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	2
..CHUSTALEA						
..AMPHIPODA						
..GAMMARIDAE	--	1	--	--	--	--
..TALITRIDAE	--	--	2	--	--	--
..HYALLELA						
..ISOPODA						
..ASELLIDAE	8	8	2	--	1	--
..ASELLUS						
..INSECTA						
..COLEOPTERA						
..ELMIDAE	--	--	9	--	--	2
..DUBIRAPHIA	--	2	--	--	--	2
..OPTIOSERVUS	2	6	14	--	--	6
..STENELMIS						
..PSEPHENTIDAE	--	1	6	--	--	--
..ECTOPRIA	4	11	12	--	2	24
..PSEPHENUS						
..DIPTERA						
..CERATOPOGONIDAE=HELEIDAE	--	--	--	--	--	2
..UNKNOWN GENUS	--	--	--	--	--	--
..CHIRONOMIDAE	27	--	6	--	--	--
..ABLABESMYIA	--	--	--	--	--	2
..BRILLIA	--	--	--	--	--	14
..CONCHAPELOPIA	--	--	--	1	2	--
..CORYNONEURA	--	2	--	--	--	--
..CRICOTOPUS	--	26	--	--	--	--
..EUKIEFFERIELLA	--	--	--	1	--	--
..LIMNOCHIRONOMUS	--	--	15	1	--	38
..MICROTENDIPES	--	--	--	--	--	60
..ORTHOCLADIUS	--	--	1	--	5	--
..PARACLADELLA	--	--	--	--	--	4
..PARAMETRICNEMUS	--	--	--	6	--	--
..PARATANYTARSUS	--	--	5	--	--	26
..PHAENOPSECTRA	--	--	--	--	--	2
..POLYPEDILUM	--	--	--	1	--	--
..PSEUDUCHIRONOMUS	--	--	--	--	--	1
..RHOTANTARSUS	--	18	--	--	3	26
..THIENEMANNIELLA	--	8	2	--	--	6
..EMPIDIDAE	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	4
..MUSCIDAE	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	4
..SIMULIIDAE	--	--	--	--	--	--
..SIMULIUM	--	45	--	7	--	6
..TIPULIDAE	--	--	--	--	--	--
..TIPULIDAE	--	3	1	--	1	6
..TIPULIDAE	--	--	--	--	--	4
..TIPULIDAE	--	--	--	1	--	--
..EPHEMEROPTERA						
..BAETIDAE	4	6	2	3	--	--
..CAENIDAE	--	--	65	--	--	30
..CAENIS	--	--	--	--	--	--
..EPHEMERELLIDAE	2	1	--	--	--	--
..EPHEMERELLA	--	--	--	--	--	--
..HEPTAGENIIDAE	--	--	--	--	2	--
..STENACRON	8	36	8	3	2	52
..SIPHONURIDAE	--	--	--	--	--	14
..SYNCHIA	--	--	--	--	--	--
..HEMIPTEHA						
..CORIXIDAE	--	--	1	--	--	--
..SIGARA	--	--	--	--	--	--
..MEGALOPTERA	--	--	--	--	--	--
..CORYDALIDAE	--	--	--	--	--	2
..NIGRONIA	--	--	--	--	--	--
..SIALIDAE	--	--	2	--	--	--
..SIALIS	--	--	--	--	--	--
..ODONATA						
..AGRIIDAE	--	--	1	--	--	--
..AGRILON	--	--	1	--	--	--
..COENAGRIONIDAE	--	--	--	--	--	--
..ARGIA	--	--	--	--	--	--
..LILLOPTEHA						
..UNKNOWN FAMILY	--	1	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..TRICHOPTERA						
..HELICOPHYCHIDAE	--	--	--	--	--	184
..HELICOPSYCHE	--	--	--	--	--	38
..HYDROPSYCHIDAE	--	--	--	--	--	34
..CHEUMATOPSYCHE	25	42	3	12	64	8
..HYDROPSYCHE	23	73	4	86	16	--
..POTAMYIA	--	--	5	--	--	--
..SYMPHITOPSYCHE	--	--	--	6	4	--
..HYDROPTILIDAE	--	--	--	--	--	128
..HYDROPTILA	--	--	20	1	--	4
..LEUCOTRICHIA	--	--	--	--	--	--
..OCHROTRICHIA	1	18	--	--	--	--
..LEPTOCERIDAE	--	--	--	--	--	12
..MYSTACIDES	--	--	--	--	--	--
..LIMNEPHILIDAE	--	--	1	--	--	--
..APATANIA	--	--	--	--	--	--
..PHILOPOTAMIDAE	22	129	3	38	22	56
..CHIMARRA	1	--	--	--	--	--
..DOLOPHILODES	--	--	--	--	--	--
..POLYCENTROPIDAE	--	--	5	--	--	24
..NEURECLIPSIS	--	1	--	--	--	--
..NYCTIOPHYLAX	--	1	--	--	--	2
..POLYCENTROPUS	--	--	--	--	--	--
..PSYCHOMYLIDAE	5	--	--	--	--	--
..PSYCHOMYLIA						
MOLLUSCA (MOLLUSCS)						
..STYLIARIA						
..NUCULOIDEA						
..SPHAERIIDAE	1	3	--	--	--	2
..UNKNOWN GENUS	--	--	--	--	--	--
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE	1	--	--	--	--	--
..FERRISSIA	1	--	--	--	--	--
..LYMNAEIDAE	1	--	--	--	--	--
..LYMNAEA	1	--	--	--	--	--
..PHYSA	1	--	--	--	--	--
..PLANORBIDAE	1	--	--	--	--	--
..HELISOMA						
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA	9	--	--	--	--	--
..TRICLADIDA	9	--	--	1	--	--
..PLANARIIDAE	--	--	1	--	2	--
..UNKNOWN GENUS	--	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	53	--	--	--	48

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

	01472129	FRENCH CREEK NEAR KNAUERTOWN, PA.		
DATE	OCT 30 72	OCT 3 73	OCT 24 74	OCT 27 76
TIME	0000	0000	0000	1200
TOTAL COUNT	64	343	166	136
ORGANISM	COUNT	COUNT	COUNT	COUNT
ANNELIDA				
..OLIGOCHAETA				
..UNKNOWN ORDER				
..UNKNOWN FAMILY				
..UNKNOWN GENUS				
..UNKNOWN GENUS #1	--	--	--	--
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
..HYDRACARINA				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	1	--	--
..INSECTA				
..COLEOPTERA				
..ELMIDAE				
..OPTIOSERVUS	--	7	13	11
..OULIMNIUS	--	--	1	1
..PROMORESIA	--	--	1	--
..STENELMIS	--	4	9	5
..DIPTERA				
..CHIRONOMIDAE	--	5	23	--
..CARDIOCLADIUS	--	--	--	--
..CONCHAELOPIA	--	--	--	2
..CORYNONEURA	--	--	--	--
..CRICOTOPUS	--	--	--	20
..EUKIEFFERIELLA	--	--	--	9
..MICROTENDIPES	--	--	--	5
..ORTHOCLADIUS	--	--	--	--
..POLYPEDILUM	--	--	--	--
..RHEOTANYTARSUS	--	--	--	18
..THIENEMANNIELLA	--	--	--	4
..UNKNOWN GENUS	--	--	--	--
..EMPIDIIDAE				
..HEMERODROMIA	--	--	--	--
..UNKNOWN GENUS	--	--	--	--
..SIMULIIDAE				
..SIMULIUM	--	3	--	--
..TIPULIDAE				
..ANTOCHA	--	1	5	7
..TIPULA	--	1	--	--
..EPHEMEROPTERA				
..BAETIDAE				
..BAETIS	--	6	1	--
..PSEUDOCLOEON	--	--	--	--
..EPHEMERELLIDAE	--	--	4	6
..EPHEMERELLA	--	--	--	--
..HEPTAGENIIDAE	--	4	7	2
..STENONEMA	11	--	--	--
..LEPTOPHLEBIIDAE	--	--	--	--
..PARALEPTOPHLEBIA	3	--	--	--
..SIPHONURIDAE	--	--	--	--
..ISONYCHIA	1	--	1	--
..UNKNOWN GENUS	--	--	--	--
..HEMIPTERA				
..NAUCORIDAE				
..PELOCORIS	--	--	--	--
..MEGALOPTERA				
..CORYDALIDAE				
..CHAULIODES	--	--	2	--
..PLECOPTERA				
..CAPNIIDAE				
..ALLOCAPNIA	--	--	--	--
..PERLIDAE				
..ACRONEURIA	1	6	--	--
..PARAGNETINA	--	2	--	--
..PERLODIDAE	--	--	--	--
..UNKNOWN GENUS	--	--	--	--
..PTERONARCIDAE	--	--	--	--
..ALLONARCYS	--	--	--	--
..TAENIOPTERYGIDAE				
..TAENIOPTERYX	2	--	--	2
..TRICHOPTERA				
..BRACHYCENTRIDAE				
..BRACHYCENTRUS	--	--	--	--
..GLOSSOSOMATIDAE	--	4	4	6
..GLOSSOSOMA	--	--	--	--
..HYDROPSYCHIDAE				
..CHEUMATOPSYCHE	13	45	6	7
..HYDROPSYCHE	11	232	6B	17
..MACRONEMA	--	--	--	--
..SYMPHYTOPSYCHE	--	--	--	--
..HYDROPTILIDAE				
..HYDROPTILA	--	--	--	--
..LEUCOTRICHIA	--	--	--	--
..OCHROTRICHIA	4	--	3	--
..LEPTOCERIDAE				
..MYSTACIDES	--	--	--	--
..OECETIS	2	--	--	--
..LIMNephilidae				
..APATANIA	--	--	--	--
..GOERA	--	--	--	1
..MOLANNIDAE				
..MOLANNA	--	1	--	--
..PHILOPOTAMIDAE				
..CHIMARRA	11	21	7	3
..POLYCENTROPIDIDAE				
..NEURECLIPSIS	5	--	--	--
..NYCTIOPHYLAX	--	--	2	--
..POLICEPHIDUS	--	--	--	--
..PSYCHOMYIDAE				
..PSYCHOMYIA	--	--	--	2
..RHYACOPHILIDAE				
..RHYACOPHILA	--	--	2	--
MOLLUSCA (MOLLUSCS)				
..GASTROPODA				
..BASOMMATOPHORA				
..PHYSIDAE				
..PHYSA	--	--	--	--
PLATYHELMINTHES (FLATWORMS)				
..TURBELLARIA				
..TRICLADIDA				
..PLANARIIDAE	--	--	8	--
..UNKNOWN GENUS	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--
..UNKNOWN GENUS	--	--	--	B

01472129 FRENCH CREEK NEAR KNAUERTOWN, PA.				
DATE	OCT 21, 77	NOV 1, 78	NOV 8, 79	NOV 6, 80
TIME	1200	1420	1230	1530
TOTAL COUNT	491	427	151	1088
ORGANISM	COUNT	COUNT	COUNT	COUNT
ANNELIDA				
..OLIGOCHAETA				
...UNKNOWN ORDER				
...UNKNOWN FAMILY				
...UNKNOWN GENUS	--	--	--	4
...UNKNOWN GENUS #1	6	--	--	--
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
...HYDRACARINA				
...UNKNOWN FAMILY				
...UNKNOWN GENUS	2	8	--	--
..INSECTA				
...COLEOPTERA				
...ELMIDAE				
...OPTIOSERVUS	10	4	--	12
...OULIMNIUS	--	--	2	--
...PROMORESIA	--	--	--	8
...STENELMIS	5	3	--	--
...DIPTEKA				
...CHIRONOMIDAE	--	--	--	--
...CARDIOCLADIUS	--	4	--	--
...CONCHAPELOPIA	7	4	--	18
...CORYNONEURA	--	--	--	--
...CRICOTOPIUS	25	49	--	--
...EUKIEFFERIELLA	10	2	--	4
...MICROTENDIPES	--	--	--	--
...ORTHOCCLADIUS	--	--	22	112
...POLYPEDILUM	9	11	--	24
...RHOTANYTARSUS	30	99	7	119
...THIEMANNIELLA	--	5	--	--
...UNKNOWN GENUS	11	--	--	--
...EMPIDIDAE				
...HEMERODROMIA	2	--	--	--
...UNKNOWN GENUS	--	--	1	--
...SIMULIIDAE				
...SIMULIUM	--	3	1	1
...TIPULIDAE				
...ANTOCHA	22	9	33	20
...TIPULA	--	--	--	--
..EPHEMEROPTERA				
...BAETIDAE				
...BAETIS	--	2	--	--
...PSEUDOCLOEON	--	--	1	--
...EPHEMERELLIDAE				
...EPHEMERELLA	8	5	3	20
...HEPTAGENIIDAE				
...STENONEMA	14	3	7	16
...LEPTOPHLEBIIDAE				
...PARALPTOPHLEBIA	--	--	--	--
...SIPHONURIDAE				
...ISONYCHIA	1	--	--	--
...UNKNOWN GENUS	--	1	--	--
..HEMIPTERA				
...NAUCORIDAE				
...PELOCORIS	1	--	--	--
...MEGALOPTERA				
...CORDALIDAE				
...CHAULIOIDES	--	--	--	--
..PLECOPTERA				
...CAPNIIDAE				
...ALLOCAPNIA	--	--	1	--
...PERLIDAE				
...ACRONETURIA	2	2	1	--
...PARAGNETINA	--	--	2	--
...PERLODIDAE				
...UNKNOWN GENUS	--	--	--	12
...PTERONARCIDAE	--	--	--	1
...ALLONARCYS				
..TAENIOPTERYGIDAE				
...TAENIOPTERYX	12	24	--	4
..TRICHOPTERA				
...BRACHYCENTRIDAE				
...BRACHYCENTRUS	--	--	2	--
...GLOSSOSOMATIDAE				
...GLOSSOSOMA	2	15	7	40
...HYDROPSYCHIDAE				
...CHEUMATOPSYCHE	63	45	14	159
...HYDROPSYCHE	189	69	13	24
...MACRONEMA	--	1	--	--
...SYMPHITOPSYCHE	--	32	8	309
..HYDROPTILIDAE				
...HYDROPTILA	1	6	--	8
...LEUCOTRICHIA	1	--	--	4
...OCHROTRICHIA	11	--	--	--
...LEPTOCERIDAE				
...MYSTACIDES	9	--	--	--
...OCEGYS	--	--	--	--
...LIMNEPHILIDAE				
...APATANIA	3	--	--	4
...GOERA	3	--	--	--
..MOLANIIDAE				
...MOLANNA	--	--	--	--
...PHILOPOTAMIDAE				
...CHIMARRA	14	19	--	132
...POLYCENTROPIDAE				
...NEURECLIPSIS	--	--	--	--
...NYCTIOPHYLAX	--	2	--	--
...POLYCENTROPUS	6	--	--	--
...PSYCHOMYIIDAE				
...PSYCHOMYIA	8	--	19	21
...RHYACOPHILIDAE				
...RHYACOPHILA	2	3	--	--
MOLLUSCA (MOLLUSCS)				
..GASTROPODA				
...BASOMMATOPHORA				
...PHYSIDAE				
...PHYSA	2	--	--	--
PLATYHELMINTHES (FLATWORMS)				
..TURBELLARIA				
...TRICLADIDA				
...PLANARIIDAE	--	--	--	--
...UNKNOWN GENUS	--	--	7	--
...UNKNOWN FAMILY				
...UNKNOWN GENUS	--	--	--	12

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	01472138 FRENCH CREEK NEAR COVENTRYVILLE, PA.					
	MAY 20, 70 0000	OCT 5, 70 0000	MAY 10, 71 0000	OCT 4, 71 0000	OCT 30, 72 0000	OCT 4, 73 0000
TOTAL COUNT	113	58	76	23	272	101
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYURACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
..INSECTA						
..COLEOPTERA						
..DRYOPTIDAE						
..HELICUS	--	--	--	--	--	--
..ELMIDAE						
..OPTIOSERVUS	--	--	--	--	3	--
..OULIMNIUS	--	--	--	--	--	--
..PROMORESTIA	--	--	--	--	--	1
..STENELMIS	--	--	--	--	1	1
..PSEPHENIDAE	--	--	3	2	--	--
..PSEPHENUS	--	--	--	--	--	--
..PTILODACTYLIDAE	--	--	--	--	--	--
..PTILOTARSUS	--	--	--	--	--	--
..DIPTERA						
..ATHERICIDAE=RHAGIONIDAE						
..ATHERIX	1	--	--	--	--	--
..CHAOBORIDAE	--	--	--	--	1	--
..CHAOBORUS	--	--	--	--	--	--
..CHIRONOMIDAE	6	1	30	--	77	1
..CARDIOCLADIUS	--	--	--	--	--	--
..CONCHAPELOPIA	--	--	--	--	--	--
..CRICOTOPIUS	--	--	--	--	--	--
..MICROTENDIPES	--	--	--	--	--	--
..ORTHOCLEIDIUS	--	--	--	--	--	--
..POLYPEDILUM	--	--	--	--	--	--
..PROCLADIUS	--	--	--	--	--	--
..RHEOTANYTARSUS	--	--	--	--	--	--
..TANYTARSUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	--	--
..EMPIDIDAE	--	--	--	--	1	--
..UNKNOWN GENUS	--	--	--	--	--	--
..SIMULIIDAE	--	--	2	--	--	2
..SIMULIUM	--	--	--	--	3	--
..TIPULIDAE	--	--	3	--	8	--
..ANTOCHA	9	--	--	--	--	--
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	23	10	3	--	3	2
..PSEUDOCLOEON	--	--	--	--	--	--
..CAENIDAE	--	--	--	--	--	--
..CAENIS	--	--	--	--	--	--
..EPHEMERELLIDAE						
..EPHEMERELLA	25	--	28	4	3	--
..SERRATELLA	--	--	--	--	--	--
..HEPTAGENIIDAE						
..EPEORUS	3	--	--	--	--	--
..STENONEMA	8	14	--	3	15	4
..LEPTOPHELEIIDAE						
..PARALEPTHELEBIA	--	--	--	--	1	--
..UNKNOWN GENUS	--	--	--	--	--	--
..SIPHONURIDAE						
..ISONYCHIA	1	--	--	--	3	1
..SIPHONURUS	1	--	--	--	--	--
..LEPIDOPTERA						
..PYRALIDIDAE						
..PARARGYACTIS	--	--	--	--	--	--
..PLECOPTERA						
..PERLIDAE						
..ACRONEURIA	1	1	--	--	6	2
..NEOPERLA	--	--	--	--	--	--
..PARAGNEURIA	--	--	--	--	10	--
..PERLODIDAE	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..TAENIOPTERYGIDAE	--	--	--	--	3	--
..TAENIOPTERYX	--	--	--	--	--	--
..TRICHOPTERA						
..BRACHYCENTRIDAE					6	--
..MICRASEMA	--	--	--	--	--	--
..GLOSSOSOMATIDAE	--	--	--	--	--	2
..GLOSSOSOMA	--	--	--	--	--	--
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE	3	6	2	6	24	39
..DIPLECTRONA	--	--	--	--	--	--
..HYDROPSYCHE	32	14	5	8	87	33
..POTAMIA	--	--	--	--	--	--
..SYMPHITOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE						
..HYDROPTILA	--	--	--	--	6	--
..LEUCOTRICHIA	--	--	--	--	--	--
..OCHROTRICHIA	--	--	--	--	--	--
..LIMNIPHILIDAE	--	--	--	--	1	--
..APATANIA	--	--	--	--	--	--
..GOERA	--	--	--	--	--	--
..MOLANNIDAE						
..MOLANNA	--	2	--	--	--	1
..PHILOPOTAMIDAE						
..CHIMARRA	--	--	--	--	6	10
..DOLOPHILODES	--	--	--	--	--	--
..POLYCENTROPODIDAE						
..NYCTIOPHILAK	--	--	--	--	--	--
..PHYLLOCENTROPUS	--	--	--	--	--	2
..POLYCENTROPUS	--	--	--	--	--	--
..PSYCHOMYIIDAE						
..LYPE	--	--	--	--	--	--
..PSYCHOMYIA	--	10	--	--	3	--
..RHYACOPHILIDAE						
..RHYACOPHILA	--	--	--	--	1	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA	--	--	--	--	--	1

01472138 FRENCH CREEK NEAR COVENTRYVILLE, PA.						
DATE	OCT 24 74	OCT 27 76	OCT 21 77	NOV 1 78	NOV 9 79	NOV 8 80
TIME	0000	0830	0930	1116	0900	1300
TOTAL COUNT	31	180	380	23	163	684
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	2	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	1	--	5	--
..INSECTA						
..COLEOPTERA						
..ORYZOPIDAE		1	--	--	--	--
..HELICHUS						
..ELMIDAE						
..OPTIOSERVUS	--	3	--	--	2	8
..OULIMNIUS	--	--	--	--	1	--
..PROMORESIA	--	--	--	--	--	4
..STENELMIS	--	--	13	--	--	--
..PSEPHENIDAE						
..PSEPHENUS	--	1	--	--	2	4
..PTILODACTYLIDAE						
..ANCHYTARSUS	--	--	1	--	--	--
..DIPTERA						
..ATHERICIDAE=RHAGIONIDAE						
..ATHERIX	--	--	3	--	1	--
..CHAOBORIDAE						
..CHAOBORUS	--	--	--	--	--	--
..CHIRONOMIDAE						
..CARDIOTRADIUS	--	--	1	--	--	--
..CONCHAPELOPIA	--	--	--	--	1	--
..CRICOTOPUS	--	--	15	--	--	--
..MICROTENDIPES	--	--	--	--	--	4
..ORTHOCCLADUS	--	--	--	--	24	21
..POLYPEDILUM	--	--	2	--	1	--
..PROCLADIUS	--	--	1	--	--	--
..RHEOTANYTARSUS	--	--	7	--	2	78
..TANYTARSUS	--	--	--	--	1	--
..THIENEMANNIELLA	--	5	--	--	--	--
..EMPIDIDAE						
..UNKNOWN GENUS	--	--	--	--	1	--
..SIMULIIDAE						
..SIMULIUM	--	--	--	--	--	--
..TIPULIDAE						
..ANTOCHA	3	5	10	--	15	16
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	--	--	9	--	--	5
..PSEUDOCLOEON	--	--	--	1	3	--
..CAENIDAE						
..CAENIS	--	--	--	--	1	--
..EPHEMERELLIDAE						
..EPHEMERELLA	--	28	--	--	11	--
..SEHRATELLA	--	--	--	--	--	8
..HEPTAGENIIDAE						
..EPEORUS	--	--	--	--	--	--
..STENONEMA	4	34	64	1	14	60
..LEPTOPHLEBIIDAE						
..PARALEPTOPHLEBIA	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	4	--
..SIPHONURIDAE						
..ISONYCHIA	--	--	--	1	--	12
..SIPHONURUS	2	--	--	--	--	--
..LEPIDOPTERA						
..PYRALIDIDAE						
..PARAGYACTIS	--	--	14	1	--	8
..PLECOPTERA						
..PERLIDAE						
..ACRONEURIA	--	--	3	--	7	2
..NEOPERLA	--	--	42	--	2	--
..PARAGETTINA	--	--	--	--	--	--
..PERLODIDAE						
..UNKNOWN GENUS	--	--	--	--	10	--
..TAENIOPTERYGIDAE						
..TAENIOPTERYX	--	5	--	--	3	--
..TRICHOPTERA						
..BRACHYCENTRIDAE						
..MICRASEMA	--	12	--	--	9	120
..GLOSSOSOMATIDAE						
..GLOSSOSOMA	1	4	1	--	--	--
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE	2	25	23	--	8	96
..DIPLECTRONA	--	--	--	--	1	--
..HYDROPSYCHE	9	17	93	5	--	--
..POTAMYIA	--	--	3	--	--	--
..SYMPHITOPSYCHE	--	--	--	14	15	60
..HYDROPTILIDAE						
..HYDROPTILA	--	--	--	--	--	--
..LEUCOTRICHIA	--	--	1	--	1	8
..OCHROTRICHIA	--	3	--	--	--	--
..LIMNephilidae	--	--	--	--	--	--
..APATANIA	--	47	--	--	3	20
..GOERA	--	1	2	--	--	8
..MOLANNIDAE						
..MOLANNA	--	--	--	--	--	--
..PHILOPOTAMIDAE						
..CHIMARRA	5	12	9	--	--	8
..DOLOPHILODES	--	--	--	--	3	--
..POLYCENTROPODIDAE						
..NYCTIOPHYLAX	--	--	--	--	1	--
..PHYLOCENTROPUS	--	--	12	--	--	--
..POLYCENTROPUS	--	2	--	--	--	4
..PSYCHOMYIIDAE						
..LYPE	--	--	1	--	--	--
..PSYCHOMYIA	--	1	--	--	5	132
..RHYACOPHILIDAE						
..RHYACOPHILA	--	--	--	--	3	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE	5	1	2	--	1	8
..FERRISSIA						



Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	01472140		S BR FRENCH CR AT COVENTRYVILLE, PA.			
	MAY 7, 70 0000	OCT 5, 70 0000	MAY 10, 71 0000	OCT 4, 71 0000	OCT 30, 72 0000	OCT 3, 73 0000
TOTAL COUNT	49	118	193	36	1053	288
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	1
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
..OPTIOSERVUS	--	--	--	0	14	13
..OULIMNIUS	--	--	--	0	17	6
..STENELMIS	--	--	--			
..PSEPHENIDAE	--	--	--			
..ECTOPHIA	--	--	--			
..PSEPHENUS	--	--	--	3	--	--
..DIPTERA						
..CHIRONOMIDAE	9	1	28	0	53	3
..CONCHAPELOPIA	--	--	--	--	--	--
..CRICOTOPUS	--	--	--	--	--	--
..EUKIEFFERIELLA	--	--	--	--	--	--
..MICROPSECTRA	--	--	--	--	--	--
..NANOCLADIUS	--	--	--	--	--	--
..ORTHOCLADIUS	--	--	--	--	--	--
..PENTANEURA	--	--	--	--	--	--
..POLYPEDILUM	--	--	--	--	--	--
..RIEOTANYTARSUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	2	--
..EMPIDIDAE	--	--	--	--	--	--
..HEMERODROMIA	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..SIMULIIDAE						
..SIMULIUM	3	--	4	0	15	1
..TIPULIDAE	--	--	--	--	--	--
..ANTOCHIA	1	--	7	0	3	--
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	--	16	2	0	--	3
..PSEUDOCLOEON	--	--	--	--	--	--
..CAENIDAE	--	--	--	--	--	--
..CAENIS	--	--	--	--	--	--
..EPHEMERELLIDAE						
..EPHEMERELLA	5	3	51	1	98	--
..HEPTAGENIIDAE	--	--	--	--	--	--
..STENONEMA	--	23	5	10	29	5
..STIPHONURIDAE	--	--	--	--	--	--
..ISONYCHIA	--	--	--	0	22	1
..LEPIDOPTERA						
..PYRALIDIDAE						
..PARARGACTIS	--	--	--	--	--	8
..MEGALOPTERA						
..CORYDALIDAE						
..CHAULIOIDES	--	--	--	--	1	--
..CORYDALUS	1	--	--	--	1	--
..NIGRONIA	--	--	--	--	--	--
..ODONATA						
..GOMPHIDAE	--	--	--	--	--	1
..PLECOPTERA						
..PERLIDAE						
..ACRONEURIA	1	--	1	2	--	2
..NEOPERA	--	--	--	--	--	--
..PARAGNEURIA	--	--	--	--	12	1
..TAENIOPTERYGIDAE	--	--	--	--	1	--
..TAENIOPTERYX	--	--	--	--	--	--
..TRICHOPTERA						
..BRACHYPTERIDAE						
..MICRASEMA	--	--	--	--	--	--
..GLOSSOSOMATIDAE	--	--	1	--	13	1
..GLOSSOSOMA	--	--	--	--	--	--
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE	1	25	36	5	112	45
..HYDROPSYCHE	28	21	55	8	370	178
..MACRONEMA	--	--	--	--	9	4
..SYMPHITOPSYCHE	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	7	--	--
..HYDROPTILIDAE						
..HYDROPTILA	--	--	--	--	3	--
..LEUCOTRICHIA	--	--	--	--	--	1
..OCHROTRICHIA	--	--	--	--	--	--
..LIMNephilidae						
..GOERA	--	--	--	--	--	--
..MOLANNIDAE	--	--	--	--	--	2
..MOLANNA	--	--	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--	278	11
..CHIMARRA	--	--	--	--	--	--
..DOLOPHILODES	--	--	--	--	--	--
..POLYCENTROPIDAE	--	--	--	--	--	1
..POLYCENTROPUS	--	--	--	--	--	--
..PSYCHOMYIIDAE	--	29	3	--	--	--
..PSYCHOMYIA	--	--	--	--	--	--
..RHYACOPHIDAE	--	--	--	--	--	--
..RHYACOPHILA	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..BIVALVIA						
..NUCULOIDEA						
..SPHAERIIDAE						
..UNKNOWN GENUS	--	--	--	--	--	--
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA	--	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIA						
..PLANARIIDAE	--	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--

01472140 S BR FRENCH CR AT COVENTRYVILLE, PA.						
DATE	OCT 25 74	OCT 27 76	OCT 21 77	NOV 1 78	NOV 9 79	NOV 6 80
TIME	0000	0830	1030	1215	0800	1400
TOTAL COUNT	271	972	942	71	137	1499
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	3	2	--	--	12
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
..OPTIOSERVUS	8	31	60	--	6	60
..OULIMNIUS	--	5	--	--	--	--
..STENELMIS	8	20	12	2	7	--
..PSEPHENIDAE						
..ECTOPRIA	--	1	--	--	--	--
..PSEPHENUS	--	--	--	--	--	--
..DIPTERA						
..CHIRONOMIDAE	26	--	--	--	--	--
..CONCHAELOPIA	--	11	5	--	--	27
..CRICOTOPUS	--	49	--	--	2	--
..EUKIEFFERIELLA	--	--	2	--	--	--
..MICROPSECTRA	--	--	11	--	--	--
..NANOCLADIUS	--	--	--	--	--	16
..ORTHOCLADIUS	--	--	17	--	9	32
..PENTANEURA	--	1	--	--	--	--
..POLYPEDILUM	--	3	--	--	--	--
..RHEOTANYTARSUS	--	72	--	--	--	274
..THIENEMANNIELLA	--	8	2	--	--	--
..EMPIDIDAE	--	--	--	--	--	--
..HEMERODROMIA	--	1	--	--	--	1
..UNKNOWN GENUS	--	--	--	--	--	--
..SIMULIDAE						
..SIMULIUM	--	4	--	--	--	8
..TIPULIDAE	--	--	--	--	--	--
..ANTOCHA	7	29	14	--	2	40
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	5	--	1	--	4	--
..PSEUDOCLOEON	--	--	1	--	--	--
..CAENIDAE						
..CAENIS	--	--	--	--	--	5
..EPHEMERELLIDAE						
..EPHEMERELLA	14	88	28	--	3	48
..HEPTAGENIIDAE						
..STENONEMA	13	12	34	--	4	52
..SIPHONURIDAE						
..ISONCHIA	1	4	28	--	--	4
..LEPIDOPTERA						
..PYRALIDIDAE						
..PARARGYACTIS	10	--	14	--	--	4
..MEGALOPTERA						
..CORDYLIDAE						
..CHAULTODES	1	--	--	--	--	--
..CORYDALUS	--	4	4	--	1	4
..NIGRONIA	--	--	--	--	--	4
..ODONATA						
..GOMPHIDAE	--	--	--	--	--	--
..PLECOPTERA						
..PERLIDAE						
..ACRONEURIA	--	--	--	--	1	--
..NEOPERLA	--	2	--	--	--	--
..PARAGNETINA	3	--	2	--	2	8
..TAENIOPTERYGIDAE						
..TAENIOPTERYX	--	2	35	--	3	8
..TRICHOPTERA						
..BRACHYCENTRIDAE						
..MICRASENA	4	8	--	--	--	5
..GLOSSOSOMATIDAE						
..GLOSSOSOMA	1	4	2	--	1	16
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE	48	352	480	19	28	512
..HYDROPSYCHE	92	201	172	21	52	12
..MACRONEMA	5	12	--	--	--	--
..SYMPHITOPSYCHE	--	--	--	29	9	233
..UNKNOWN GENUS	--	--	--	--	--	--
..HYDROPTILIDAE						
..HYDROPTILA	--	--	--	--	--	4
..LEUCOTRICHIA	--	1	5	--	--	58
..OCHROTRICHIA	--	1	--	--	--	--
..LIMNIPHILIDAE						
..GOERA	--	14	14	--	--	--
..MOLANNIDAE						
..MOLANNA	--	--	--	--	--	--
..PHILOPOTAMIDAE						
..CHIMARRA	18	37	13	--	3	18
..DOLOPHILODES	1	--	--	--	--	--
..POLYCENTROPODIDAE						
..POLYCENTROPUS	--	2	--	--	--	--
..PSYCHOMYIIDAE						
..PSYCHOMYIA	--	1	8	--	--	8
..RHYACOPHILIDAE						
..RHYACOPHILA	--	2	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..BIVALVIA						
..NUCULOIDEA						
..SPHAERIIDAE						
..UNKNOWN GENUS	--	--	--	--	--	4
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA	--	--	--	--	--	12
PLATYHELMINTHES (PLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE	2	--	--	--	--	--
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	7	--	--	--	12

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

	01472154 FRENCH CREEK NEAR PUGHTOWN, PA.					
DATE	MAY 20 70	OCT 5 70	MAY 10 71	OCT 4 71	OCT 30 72	OCT 4 73
TIME	0000	0000	0000	0000	0000	0000
TOTAL COUNT	116	58	92	34	643	225
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..PROSOPORA						
..LUMBRICULIDAE						
..UNKNOWN GENUS	--	--	--	--	--	--
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..ARANEIDA						
..PISAUROIDAE						
..DOLOMEDES	--	--	--	--	--	--
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
..OPTIOSERVUS	--	--	--	--	4	3
..OULIMNIUS	--	--	--	--	--	--
..STENELMIS	--	--	--	--	1	4
..UNKNOWN GENUS	--	--	--	--	--	--
..PSEPHENIDAE						
..PSEPHENUS	--	--	6	--	--	1
..DIPTERA						
..ATHERICIDAE=RHAGIONIDAE						
..ATHERIX	--	--	--	--	--	--
..CHIRONOMIDAE	43	3	14	--	81	4
..CARDIOCLADIUS	--	--	--	--	--	--
..CRICOTUS	--	--	--	--	--	--
..EUKIETTERIA	--	--	--	--	--	--
..ORTHOCCLADIUS	--	--	--	--	--	--
..POLYPEDILUM	--	--	--	--	--	--
..RHEOTANTARSUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	--	--
..EMPIDIDAE					5	--
..SIMULIIDAE						
..SIMULIUM	1	--	12	15	1	1
..TIPULIDAE	--	--	--	--	--	--
..ANTOCHA	3	--	6	--	8	--
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	9	1	--	3	2	2
..PSEUDOCLOEON	--	--	--	--	--	--
..EPHEMERELLIDAE						
..EPHEMERELLA	15	--	11	2	47	--
..SERRATELLA	--	--	--	--	--	--
..HEPTAGENIIDAE	--	--	--	--	10	--
..EPEORUS	--	--	--	--	65	8
..STENONEMA	7	4	7	--	--	--
..SIPHONURIDAE						
..AMELETUS	--	1	--	--	--	--
..ISONYCHIA	--	--	--	--	23	3
..LEPIDOPTERA						
..PYRALIDIDAE						
..PARARGYACTIS	--	--	--	--	--	--
..MEGALOPTERA						
..CORDALIDAE						
..CORDALUS	--	--	--	--	1	1
..C. CORNUTUS	--	--	--	--	--	--
..NEUROPTERA						
..SISYRIDAE						
..CLIMACIA						
..C. AREOLARIS	--	--	--	--	--	--
..PLECOPTERA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
..PERLIDAE						
..NEODIPASGANOPHORA	--	--	--	--	--	--
..ACRONEURIA	3	9	--	--	4	4
..PARAGNETINA	--	--	--	--	3	--
..PERLODIDAE						
..UNKNOWN GENUS	--	--	--	--	--	--
..TAENIOPTERYGIDAE	--	--	--	--	--	--
..TAENIOPTERYX	--	--	--	--	--	--
..TRICHOPTERA						
..BRACHYCENTRIDAE					1	--
..MICRASENA	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	1	--
..GLOSSOSOMATIDAE						
..GLOSSOSOMA	--	--	--	--	27	1
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE	--	8	12	2	69	33
..HYDROPSYCHE	35	12	24	7	229	150
..MACRONEMA	--	--	--	--	--	--
..SYMPHITOPSYCHE	--	--	--	--	--	--
..HYDROPTILAE						
..LEUCOTRICHIA	--	--	--	--	1	--
..OCHROTRICHIA	--	--	--	--	--	--
..LEPIDOSTOMATIDAE						
..LEPIDOSTOMA	--	--	--	--	1	--
..LEPTOCERIDAE						
..MYSTACIDES	--	--	--	--	1	--
..OECETIS	--	--	--	--	1	--
..LIMNAPHILIDAE						
..APATANIA	--	--	--	--	1	--
..GOERA	--	--	--	--	--	--
..MOLANNIDAE						
..MOLANNA	--	--	--	--	--	1
..PHILOPOTAMIDAE						
..CHIMARA	--	--	--	--	52	9
..POLYCENTROPODIDAE						
..NEURECLIPSIS	--	--	--	--	4	--
..NYCTIOPHYA	--	--	--	--	--	--
..POLYCENTROPUS	--	--	--	--	2	--
..PSYCHOMYIIDAE						
..PSYCHOMYIA	--	20	--	5	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA	--	--	--	--	--	--
..PLANORBIDAE						
..GYRAULUS	--	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE	--	--	--	--	--	--
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--

01472154 FRENCH CREEK NEAR PUGHTOWN, PA.						
DATE	OCT 25, 74	OCT 27, 76	OCT 21, 77	NOV 1, 78	NOV 9, 79	NOV 6, 80
TIME	0000	1400	1500	1000	1000	1030
TOTAL COUNT	189	362	747	79	96	615
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..PROSOPORA						
..LUMBRICULIDAE	--	--	--	--	3	--
..UNKNOWN GENUS						
..UNKNOWN ORDER						
..UNKNOWN FAMILY	--	1	--	--	--	--
..UNKNOWN GENUS						
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..ARANEIDA						
..PISAUDIDAE						
..DOLOMEDES	--	--	--	--	2	--
..HYDRACARINA						
..UNKNOWN FAMILY	--					
..UNKNOWN GENUS	--	2	1	--	4	2
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
..OPTIOSERVUS	--	2	1	--	--	--
..OULIMNIUS	--	--	--	--	1	--
..STENELMIS	--	--	--	2	--	--
..UNKNOWN GENUS	--	--	--	--	--	2
..PSEPHENIDAE	--	--	1	--	--	--
..PSEPHENUS	--	--	1	--	--	--
..DIPTERA						
..ATHERICIDAE=RHAGIONIDAE						
..ATHERIX	1	--	--	--	--	--
..CHIRONOMIDAE	39	--	--	--	--	--
..CARDIOCLADIUS	--	3	--	--	--	--
..CRICOTUS	--	8	10	1	27	2
..EUNIEFFERIELLA	--	10	15	--	--	12
..ORTHOCLADIUS	--	4	--	--	15	14
..POLYPELIDUM	--	--	1	--	--	--
..RHABDANTARSUS	--	23	18	--	1	24
..THIENEMANNIELLA	--	3	--	--	--	--
..EMPIDIDAE	--	--	--	--	--	--
..SIMULIDAE	--	2	10	2	--	2
..SIMULIUM	--	--	--	--	--	--
..TIPULIDAE	--	--	3	--	--	2
..ANTOCHA	3	4	--	--	--	--
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	2	--	--	2	--	--
..PSEUDOCLOEON	--	1	1	--	--	--
..EPHEMERELLIDAE						
..EPHEMERELLA	10	22	47	--	4	--
..SERRATELLA	--	--	--	--	--	54
..HEPTAGENIIDAE	--	--	--	--	--	--
..EPEORUS	--	--	--	--	--	--
..STENONEMA	26	14	66	6	7	80
..SIPHONURIDAE						
..AMELETUS	--	--	--	--	--	--
..ISONYCHIA	--	3	34	12	2	54
..LEPIDOPTERA						
..PYRALIDIDAE						
..PARARGYACTIS	--	1	1	--	--	--
..MEGALOPTERA						
..CORYDALIDAE						
..CORYDALUS	--	1	--	1	--	--
..C. CORNUTUS	--	--	1	--	--	--
..NEUROPTERA						
..SISYRIDAE						
..CLIMACIA						
..C. AREOLARIS	--	--	1	--	--	--
..PLECOPTERA						
..UNKNOWN FAMILY	--	--	--	1	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..PERLIDAE						
..NEOIPHASGANOPHORA	2	--	--	--	--	--
..ACRONEURIA	--	4	3	--	1	4
..PARAGNETINA	--	1	1	1	1	6
..PERLODIDAE						
..UNKNOWN GENUS	--	--	--	--	--	12
..TAENIOPTERYGIDAE	--	1	--	--	2	6
..TAENIOPTERYX						
..TRICHOPTERA						
..BRACHYCENTRIDAE						
..MICRASMA	5	3	18	--	--	14
..UNKNOWN GENUS	--	--	--	--	--	20
..GLOSSOSOMATIDAE						
..GLOSSOSOMA	1	1	1	--	1	1
..HYDROPSYCHIDAE						
..CHEIMATOPSYCHE	21	102	180	--	--	172
..HYDROPSYCHE	55	85	146	41	--	--
..MACRONEMA	--	2	--	--	--	--
..SYMPHITOPSYCHE	--	--	--	8	19	72
..HYDROPTILIDAE						
..HYDROPTILA	--	--	--	--	--	8
..LEUCOTRICHIA	--	--	14	--	1	--
..OCHROTRICHIA	1	--	--	--	--	--
..LEPIDOSTOMATIDAE						
..LEPIDOSTOMA	--	--	--	--	--	--
..LEPTOCERIDAE						
..MYSTACIDES	--	--	--	--	--	--
..OECETIS	--	--	--	--	--	--
..LIMNAPHILIDAE						
..APATANIA	--	1	3	--	--	4
..GOERA						
..MOLANNIDAE						
..MOLANNA	--	--	--	--	--	--
..PHILOPOTAMIDAE						
..CHIMARIA	16	45	151	1	4	16
..POLYCENTROPIDIDAE						
..NEURECLIPSIS	--	--	1	--	--	--
..NYCTOPHYLAX	--	5	--	--	--	4
..POLYCENTROPUS	1	1	--	--	--	10
..PSYCHOMYIIDAE						
..PSYCHOMYIA	--	1	2	--	1	8
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA	--	3	15	1	--	4
..PLANORBIDAE						
..GYRAULUS	2	--	--	--	--	2
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE	4	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	3	--	--	--	4

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	FRENCH CREEK NEAR PHOENIXVILLE, PA.				
	MAY 21, 70 0000	OCT 5, 70 0000	MAY 10, 71 0000	OCT 4, 71 0000	OCT 30, 72 0000
TOTAL COUNT	54	58	45	24	324
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	--	--	--
..INSECTA					
..COLEOPTERA					
..ELMIDAE					
..OPTIOSERVUS	--	--	--	--	--
..STENELMIS	--	--	--	--	--
..PSEPHENIDAE	--	--	--	1	--
..PSEPHENUS	--	--	--		
..DIPTERA					
..ATHERICIDAE=RHAGIONIDAE					
..ATHERIX	--	--	--	--	--
..CHIRONOMIDAE	5	--	21	--	21
..CONCHAPELOPIA	--	--	--	--	--
..CORYNONEURA	--	--	--	--	--
..CRICOTOPUS	--	--	--	--	--
..EUKIEFFERIELLA	--	--	--	--	--
..ORTHOCLADIUS	--	--	--	--	--
..POLYPEDILUM	--	--	--	--	--
..RHEOTANTARSUS	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	4
..EMPIDIDAE	--	--	--	--	--
..HEMERODROMIA	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--
..SIMULIIDAE	23	--	1	--	--
..SIMULIUM					
..TIPULIDAE	--	--	2	--	2
..ANTOCHA	--	--			
..EPHEMEROPTERA					
..BAETIDAE	--	4	3	--	--
..BAETIS	--	--	--	--	--
..PSEUDOCLOEON	--	--	--	--	--
..EPHEMERELLIDAE	--	3	10	3	39
..EPHEMERELLA	--				
..HEPTAGENIIDAE	--	--	--	--	15
..EPTORUS	6	7	--	8	54
..STENONEMA					
..SIPHONURIDAE	--	--	--	--	5
..ISONYCHIA	--	--	--	--	
..LEPIDOPTERA					
..PYRALIIDAE	--	--	--	--	--
..PARARGYACTIS	--	--	--	--	--
..NEUROPTERA					
..SISYRIDAE	--	--	--	--	1
..CLIMACIA	--	--	--	--	
..ODONATA					
..COENAGRIONIDAE	--	--	--	--	--
..AMPHIAGRION	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--
..PLECOPTERA					
..PERLIDAE	--	--	--	--	6
..ACRONEURIA	--	--	--	--	3
..PARAGNETINA	--	--	--	--	
..TRICHOPTERA					
..BRACHYCENTRIDAE	--	--	--	--	1
..MICHASEMA	--	--	--	--	
..GLOSSOSOMATIDAE	--	--	--	--	64
..GLOSSOSOMA	--	--	--	--	
..HELICOPSYCHIDAE	--	--	--	--	1
..HELICOPSYCHE	--	--	--	--	
..HYDROPSYCHIDAE	8	11	4	1	51
..CHEIMATOPSYCHE	--	13	4	10	49
..HYDROPSYCHE	12	--	--	--	--
..MACRONEMA	--	--	--	--	--
..SYMPHITOPSYCHE	--	--	--	--	--
..HYDROPTILIDAE	--	--	--	--	--
..HYDROPTILA	--	--	--	--	--
..LEUCOPTICHA	--	--	--	--	--
..CHROTRICHA	--	--	--	--	--
..LEPIDOSTOMATIDAE	--	--	--	--	1
..LEPIDOSTOMA	--	--	--	--	
..LEPTOCERIDAE	--	--	--	--	--
..MYSTACIDES	--	--	--	--	1
..LINNEPHILIDAE	--	--	--	--	--
..APATANIA	--	--	--	--	--
..GOERA	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--
..MOLANNIDAE	--	1	--	--	--
..MOLANNA	--				
..PHILOPOTAMIDAE	--	--	--	--	5
..CHIMARRA	--	--	--	--	
..POLYCENTROPIDIDAE	--	--	--	--	1
..NEURECLIPSIS	--	--	--	--	--
..NYCTIOPHYLAX	--	--	--	--	--
..PSYCHOMYIIDAE	--	17	--	1	--
..PSYCHOMYIA					
MOLLUSCA (MOLLUSCS)					
..BIVALVIA					
..NUCULOIDEA					
..SPHAERIIDEA	--	--	--	--	--
..SPHAERIUM					
..GASTROPODA					
..BASOMMATOPHORA					
..ANCYLIDAE	--	--	--	--	--
..FERRISSIA	--	--	--	--	--
..PHYSIDAE	--	--	--	--	--
..PHYSA	--	--	--	--	--
..PLANORBIDAE	--	--	--	--	--
..GYRAULUS	--	--	--	--	--
..MESOGASTROPODA					
..HYDROBIIDAE	--	--	--	--	--
..AMNICOLA					
PLATYHELMINTHES (FLATWORMS)					
..TURBELLARIA					
..TRICLADIDA	--	--	--	--	--
..PLANARIIDAE	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--

DATE TIME	01472157	FRENCH CREEK NEAR PHOENIXVILLE, PA.		
	OCT 4 73 0000	OCT 25 74 0000	NOV 4 75 1330	OCT 27 76 1445
TOTAL COUNT	96	85	232	277
ORGANISM	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
..HYDRACARINA				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	--	1
..INSECTA				
..COLEOPTERA				
..ELMIDAE				
..OPTIOSERVUS	1	1	11	--
..STENELMIS	--	--	--	--
..PSEPHENIDAE				
..PSEPHENUS	--	--	--	1
..DIPTERA				
..ATHERICIDAE=RHAGIONIDAE				
..ATHERIX	--	--	--	--
..CHIRONOMIDAE	1	--	--	--
..CONCHAPELOPIA	--	--	--	--
..CORYNONEURA	--	--	--	1
..CRICOTOPUS	--	--	--	28
..EUKIEFFERIELLA	--	--	--	--
..ORTHOCLADIUS	--	--	22	20
..POLYPEDILUM	--	--	--	--
..RHEOTANTARSUS	--	--	5	13
..THIENEMANNIELLA	--	--	--	1
..EMPIDIDAE	--	--	--	--
..HEMERODROMIA	--	--	--	--
..UNKNOWN GENUS	--	--	--	--
..SIMULIDAE				
..SIMULIUM	--	--	3	--
..TIPULIDAE				
..ANTOCHA	--	1	5	3
..EPHEMEROPTERA				
..BAETIDAE				
..BAETIS	3	--	--	--
..PSEUDOCLOEON	--	--	--	--
..EPHEMERELLIDAE				
..EPHEMERELLA	--	2	11	9
..HEPTAGENIIDAE				
..EPEORUS	--	--	8	--
..STENONEMA	2	2	--	5
..SIPHONURIDAE				
..ISONYCHIA	3	--	--	6
..LEPIDOPTERA				
..PYRALIDIDAE				
..PARARGYACTIS	--	--	2	1
..NEUROPTERA				
..SISYRIDAE	--	--	--	--
..CLIMACIA				
..ODONATA				
..COENAGRIONIDAE				
..AMPHIAGRION	--	--	--	2
..UNKNOWN GENUS	--	--	--	--
..PLECOPTERA				
..PERLIDAE				
..ACRONEURIA	2	--	3	--
..PARAGNETINA	--	--	2	--
..TRICHOPTERA				
..BRACHYCENTRIDAE				
..MICRASEMA	--	2	7	12
..GLOSSOMATIDAE				
..GLOSSOSOMA	3	2	14	5
..HELICOPSYCHIDAE				
..HELICOPSYCHE	34	--	--	--
..HYDROPSYCHIDAE				
..CHEUMATOPSYCHE	44	24	31	24
..HYDROPSYCHE	--	18	87	112
..MACRONEMA	--	2	--	1
..SYMPHITOPSYCHE	--	--	--	--
..HYDROPTILIDAE				
..HYDROPTILA	--	--	--	--
..LEUCOTRICHIA	--	--	1	3
..OCHROTRICHIA	--	--	--	1
..LEPIDOSTOMATIDAE				
..LEPIDOSTOMA	--	--	4	--
..LEPTOCENIDAE				
..MYSTACIDES	--	--	--	--
..LIMNIPHILIDAE	--	--	--	--
..APATANIA	--	--	--	--
..GOERA	--	--	3	--
..UNKNOWN GENUS	--	--	--	1
..MOLANNIDAE				
..MOLANNA	1	--	--	--
..PHILOPOTAMIDAE				
..CHIMARRA	2	6	4	--
..POLYCENTROPODIDAE				
..NEURECLIPSIS	--	--	--	--
..NYCTIOPHYLAX	--	--	1	--
..PSYCHOMYIIDAE	--	--		
..PSYCHOMYIA	--	--	5	6
MOLLUSCA (MOLLUSCS)				
..BIVALVIA				
..NUCULOIDEA				
..SPHAERIIDAE	--	1	--	--
..SPHAERIUM				
..GASTROPODA				
..BASOMMATOPHORA				
..ANCYLIDAE				
..FERRISSIA	--	19	1	14
..PHYSIDAE	--	--	--	1
..PHYSA	--	--	--	--
..PLANORBIDAE	--	--	--	--
..GYRAULUS	--	--	--	--
..MESOGASTROPODA				
..HYDROBIDAE	--	1	--	1
..AMNICOLA				
PLATYHELMINTHES (FLATWORMS)				
..TURBELLARIA				
..TRICLADIDA				
..PLANARIIDAE	--	4	--	--
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	--	5

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

	01472157	FRENCH CREEK NEAR PHOENIXVILLE, PA.		
DATE	OCT 21, 77	OCT 31, 78	NOV 9, 79	NOV 6, 80
TIME	1600	1030	1030	0900
TOTAL COUNT	645	54	174	629
ORGANISM	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
..HYDRACarina				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	2	--	--	12
..INSECTA				
..COLEOPTERA				
..ELMIDAE				
..OPTIOSERVUS	5	--	--	4
..STENELMIS	4	--	8	--
..PSEPHENIDAE				
..PSEPHENUS	1	--	2	--
..DIPTERA				
..ATHERICIDAE=RHAGIONIDAE				
..ATHERIX	--	--	--	1
..CHIRONOMIDAE	--	--	--	--
..CONCHAPELOPIA	--	--	1	--
..CONYNOEURA	--	--	--	--
..CRICOTOPUS	--	--	4	--
..EUKIEFFERIELLA	24	--	--	4
..ORTHOCLADIUS	53	--	9	48
..POLYPEDILUM	--	--	--	4
..RHEOPANTARSUS	16	--	--	24
..THIENEMANNIELLA	2	--	--	4
..EMPIDIDAE	--	--	--	--
..HEMERODROMIA	3	--	--	--
..UNKNOWN GENUS	--	--	--	4
..SIMULIIDAE	--	--	--	12
..SIMULIUM	--	--	--	--
..TIPULIDAE	--	--	--	--
..ANTOCHA	12	--	2	8
..EPHEMEROPTERA				
..BAETIDAE				
..BAETIS	--	--	1	4
..PSEUDOCLOBON	--	--	--	4
..EPHEMERELLIDAE				
..EPHEMERELLA	18	--	--	36
..HEPTAGENIIDAE				
..EPEORUS	--	--	--	--
..STENONEMA	80	--	--	56
..SIPHONURIDAE				
..ISONYCHIA	41	--	--	8
..LEPIDOPTERA				
..PYRALIDIDAE		1	--	--
..PARARGYACTIS	9	--	--	--
..NEUROPTERA				
..SISYRIDAE				
..CLIMACIA	1	--	--	--
..ODONATA				
..COENAGRIONIDAE				
..AMPHIAGRION	--	--	--	--
..UNKNOWN GENUS	4	--	--	--
..PLECOPTERA				
..PERLIDAE				
..ACRONEURIA	1	--	--	4
..PARAGNETINA	4	--	--	--
..TRICHOPTERA				
..BRACHYCENTRIDAE				
..MICRASEMA	10	--	--	28
..GLOSSOSOMATIDAE				
..GLOSSOSOMA	12	1	--	160
..HELICOPSYCHIDAE				
..HELICOPSYCHE	--	--	--	--
..HYDROPSYCHIDAE				
..CHEUMATOPSYCHE	124	16	11	36
..HYDROPSYCHE	152	16	101	4
..MACRONEMA	5	1	--	--
..SYMPHYTOPSYCHE	--	19	31	4
..HYDROPTILIDAE				
..HYDROPTILA	1	--	--	8
..LEUCOTRICHIA	2	--	--	16
..OCHROTRICHIA	--	--	--	--
..LEPIDOSTOMATIDAE				
..LEPIDOSTOMA	--	--	--	--
..LEPTOCERTIDAE				
..MYSTACIDES	1	--	--	--
..LIMNAPHILIDAE	--	--	--	--
..APATANIA	--	--	--	8
..GOERA	1	--	--	--
..UNKNOWN GENUS	--	--	--	--
..MOLANNIDAE				
..MOLANNA	--	--	--	--
..PHILOPOTAMIDAE				
..CHIMARRA	14	--	3	72
..POLYCENTROPIDIDAE				
..NEURECLIPSIS	12	--	--	--
..NYCTIOPHYLAX	--	--	--	--
..PSYCHOMYIIDAE				
..PSYCHOMYIA	5	--	--	4
MOLLUSCA (MOLLUSCS)				
..BIVALVIA				
..NUCULOIDEA				
..SPHAERIIDAE				
..SPHAERIUM	--	--	--	--
..GASTROPODA				
..BASOMMATOPHORA				
..ANCYLIDAE				
..FERRISSIA	18	--	1	20
..PHYSIDAE	--	--	--	4
..PHISA	--	--	--	--
..PLANORBIDAE				
..GYRAULUS	1	--	--	4
..MESOGASTROPODA				
..HYDROBIIDAE				
..AMNICOLA	5	--	--	--
PLATYHELMINTHES (FLATWORMS)				
..TURBELLARIA				
..TRICLADIDA				
..PLANARIIDAE	--	--	--	--
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	--	24

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	01472170 PICKERING CREEK NEAR EAGLE, PA.					
	MAY 4.70 0000	SEP 28.70 0000	MAY 3.71 0000	SEP 27.71 0000	OCT 3.72 0000	OCT 2.73 0000
TOTAL COUNT	80	161	76	37	743	173
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
..MICROCERYLLOEPUS						
..OPTIOSERVUS					6	
..OULIMNIUS						
..STENELMIS						
..PSEPHENIDAE						
..PSEPHENUS						
..DIPTERA						
..CERATOPOGONIDAE-HELEIDAE						
..UNKNOWN GENUS	--	--	--	--	--	--
..CHIRONOMIDAE	--	--	29	--	33	--
..CONCHAPLEBIA	--	--	--	--	--	--
..CORYNONEURA	--	--	--	--	--	--
..CRICOTOPUS	--	--	--	--	--	--
..DIAMESA	--	--	--	--	--	--
..EUKIEFFERIELLA	--	--	--	--	--	--
..MICROPSECTRA	--	--	--	--	--	--
..MICROTENDIPES	--	--	--	--	--	--
..ORTHOCLADIUS	--	--	--	--	--	--
..PARAMETRIOCNEMUS	--	--	--	--	--	--
..POLYPEDILUM	--	--	--	--	--	--
..RHEOTANYTARSUS	--	--	--	--	--	--
..SMITTIA	--	--	--	--	--	--
..THIENEMANNIA	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	--	--
..EMPIDIDAE	--	--	--	--	5	--
..HEMERODROMIA	--	--	--	--	--	--
..SIMULIIDAE	--	10	3	13	27	--
..SIMULIUM	--	--	--	--	--	--
..TIPULIDAE	--	--	--	--	--	--
..ANTOCHA	--	--	2	--	4	--
..HEXATOMA	--	--	--	--	--	--
..TIPULA	--	--	--	--	--	--
..EPHEMEROPTERA						
..BAETIDAE	3	38	2	--	35	4
..CENTROPTILUM	1	--	--	--	--	--
..PSEUDOCLOEON	--	--	--	--	--	--
..CAENIDAE	--	--	--	--	--	--
..CAENIS	--	--	--	--	--	--
..EPHEMERELLIDAE	--	--	--	--	--	--
..EPHEMERELLA	17	--	12	5	7	--
..HEPTAGENIIDAE	--	--	--	--	--	--
..STENONEMA	--	--	3	8	18	9
..LEPTOPHLEBIIDAE	--	--	--	--	--	--
..PARALEPTOPHLEBIA	--	--	1	--	--	--
..SIPHONURIDAE	--	--	--	--	--	--
..ISONYCHIA	--	--	--	--	4	3
..LEPIDOPTERA						
..PYRALIDIDAE	--	--	--	--	--	--
..PARARGYACTIS	--	--	--	--	--	--
..MEGALOPTERA						
..CORYDALIDAE	--	--	--	--	--	--
..NIGRONIA	--	--	--	--	--	--
..PLECOPTERA						
..CHLOROPERLLIDAE	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..TAENIOPTERYGIDAE	--	--	--	--	--	--
..TAENIOPTERYX	--	--	--	--	--	--
..TRICHOPTERA						
..GLOSSOSOMATIDAE	--	--	3	--	3	--
..GLOSSOSOMA	--	--	--	--	--	--
..HYDROPSYCHIDAE	--	--	--	--	--	--
..CHEUMATOPSYCHE	--	26	5	--	33	6
..HYDROPSYCHE	38	45	16	11	554	147
..SYMPHITOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE	--	--	--	--	--	--
..HYDROPTILA	--	--	--	--	--	--
..LEUCOTRICHIA	--	--	--	--	7	--
..OCHROTRICHIA	--	--	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--	--	--
..CHIMARRA	1	--	--	--	7	4
..POLYCENTROPIDAE	--	--	--	--	--	--
..CYRNELLIS	--	--	--	--	--	--
..POLYCENTROPUS	--	--	--	--	--	--
..PSYCHOMYIIDAE	--	--	--	--	--	--
..PSYCHOMYIA	--	42	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE	--	--	--	--	--	--
..FERRISSIA	--	--	--	--	--	--



01472170 PICKERING CREEK NEAR EAGLE, PA.					
DATE	OCT 21 76	OCT 19 77	OCT 30 78	NOV 1 79	OCT 30 80
TIME	0845	0930	1400	1415	1250
TOTAL COUNT	820	1121	113	94	242
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA					
..OLIGOCHAETA					
..UNKNOWN ORDER					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	3	1	--	--	--
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	20	1	--	--	4
..INSECTA					
..COLEOPTERA					
..ELMIDAE					
..MICROCYLLOEPUS	1	--	--	--	--
..OPTIOSEVUS	44	69	2	3	28
..OULIMNIUS	--	--	1	--	--
..STENELMIS	2	3	--	--	--
..PSEPHENIDAE					
..PSEPHENUS	1	1	--	--	2
..DIPTERA					
..CERATOPOGONIDAE=HELEIDAE					
..UNKNOWN GENUS	1	--	--	--	--
..CHIRONOMIDAE	--	--	--	--	--
..CONCHAPELOPIA	18	10	1	--	4
..CORYNONEURA	3	--	--	--	--
..CRICOTOPUS	37	66	1	--	18
..DIAMESA	--	--	1	--	--
..EUKIEFFERIELLA	--	4	--	--	--
..MICROPSPECTRA	12	--	--	--	--
..MICROTENDIPES	2	3	1	--	12
..ORTHOCADIA	18	--	5	12	4
..PARAMETRIOCNEMUS	--	--	--	--	2
..POLYPEDILUM	--	16	--	--	--
..RHEOTANYTARSUS	16	12	3	2	--
..SMITTIA	2	--	--	--	--
..THIENEMANNIA	--	2	--	--	--
..THIENEMANNIELLA	6	--	--	--	4
..EMPIDIDAE	--	--	--	--	--
..HEMERODROMIA	6	2	--	--	2
..SIMULIIDAE					
..SIMULIUM	12	27	--	--	--
..TIPULIDAE					
..TIPULIDAE	8	16	--	5	14
..ANTOCHA	--	--	--	--	--
..HEXATOMA	--	1	--	--	--
..TIPULA	--	--	--	--	2
..EPHEMEROPTERA					
..BAETIDAE					
..BAETIS	--	--	--	--	--
..CENTROPTILUM	--	--	--	--	--
..PSEUDOCLOEON	1	2	1	--	--
..CAENIDAE					
..CAENIS	1	--	--	--	--
..EPHEMERELLIDAE					
..EPHEMERELLA	20	2	5	1	--
..HEPTAGENIIDAE					
..STENONEMA	46	11	2	7	12
..LEPTOPHLEBIIDAE					
..PARALEPTOPHLEBIA	--	--	1	--	--
..PHILONURIDAE					
..ISONYCHIA	1	4	1	--	2
..LEPIDOPTERA					
..PYRALIDIDAE					
..PARARGYACTIS	--	--	--	--	2
..MEGALOPTERA					
..CORYDALIDAE					
..NIGRONIA	--	2	--	--	--
..PLECOPTERA					
..CHLOROPERLIDAE					
..UNKNOWN GENUS	--	1	--	--	--
..TAENIOPTERYGIDAE					
..TAENIOPTERYX	5	19	3	5	--
..TRICHOPTERA					
..GLOSSOSOMATIDAE					
..GLOSSOSOMA	--	--	--	1	--
..HYDROPSYCHIDAE					
..CHEUMATOPSYSCHE	80	224	28	11	6
..HYDROPSYSCHE	403	486	26	14	88
..SYMPHITOPSYSCHE	--	--	24	32	--
..HYDROPTILIDAE					
..HYDROPTILA	--	--	--	--	2
..LEUCOTRICHIA	20	12	--	--	24
..OCHROTRICHIA	16	--	--	--	--
..PHILOPOTAMIDAE					
..CHIMARRA	14	--	4	1	8
..POLYCENTROPIDIDAE					
..CYRNELLUS	--	124	--	--	--
..POLYCENTROPUS	--	--	--	--	2
..PSYCHOMYIIDAE					
..PSYCHOMYIA	1	--	--	--	--
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
..BASOMMATOPHORA					
..ANCYLIDAE					
..FERRISSIA	--	--	1	--	--

Table 3.--Benthic invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	01472174 PICKERING CREEK NEAR CHESTER SPRINGS, PA.					
	MAY 5, 70 0000	SEP 28, 70 0000	MAY 3, 71 0000	SEP 27, 71 0000	OCT 3, 72 0000	OCT 2, 73 0000
TOTAL COUNT	28	84	96	29	413	629
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS						
..CRUSTACEA						
..AMPHIPODA	--	--	--	--	--	1
..ISOPODA						
..ASELLIDAE						
..ASELLUS	--	--	--	--	--	--
INSECTA						
..COLEOPTERA						
..ELMIDAE						
..DUBIRAPHIA						
..MACRONYCHUS	--	--	--	--	--	--
..OPTIOSERVUS	--	--	--	--	10	13
..OLIMNIUS	--	--	--	--	1	1
..STENELMIS	--	--	--	--	1	--
..PSEPHENIDAE	--	--	--	--	1	--
..EUTOPRIA	--	--	--	--	1	--
..PSEPHENUS	--	--	--	--	1	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..DIPTERA						
..ATHERICIDAE=RHAGIONIDAE						
..ATHERIX	--	--	--	--	--	--
..CHIRONOMIDAE	4	--	15	--	11	2
..ABLABESMYIA	--	--	--	--	--	--
..CONCHAPELOPIA	--	--	--	--	--	--
..CORYNONEURA	--	--	--	--	--	--
..CRICOTOPUS	--	--	--	--	--	--
..EUKIEFFERIELLA	--	--	--	--	--	--
..MICROTENDIPES	--	--	--	--	--	--
..ORTHOCLEIDIUS	--	--	--	--	--	--
..PARAMETRICNEMUS	--	--	--	--	--	--
..PSECTROCLADIUS	--	--	--	--	--	--
..RHEOTANYTARSUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	2	--
..EMPIDIDAE	--	--	--	--	--	--
..HEMERODROMIA	--	--	--	--	--	--
..MUSCIDAE						
..LIMNOPHORA	--	--	--	--	--	1
..SIMULIIDAE						
..SIMULIUM	--	1	--	8	9	5
..TIPULIDAE	--	--	1	--	5	1
..ANTOCOA	--	--	5	--	--	--
..DICRANOTA	--	--	--	--	--	--
..HEXATOMA	--	--	--	--	--	1
..TIPULA	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	--	9	9	--	20	--
..EPHEMERELLIDAE						
..EPHEMERELLA	9	--	37	5	15	2
..HEPTAGENIIDAE	--	14	3	7	15	4
..STENONEMA	--	--	--	--	--	--
..LEPTOPHLEBIIDAE	--	--	--	--	--	--
..PARALEPTOPHLEBIA	--	--	--	--	--	--
..SIPHONURIDAE	--	--	--	--	7	2
..ISONYCHIA	--	--	--	--	--	--
..TRICORYTHIDAE	--	--	--	--	--	2
..TRICORYTHODES	--	--	--	--	--	--
LEPIDOPTERA						
..MEGALOPTERA						
..CORYDALIDAE	--	--	--	--	--	--
..NIGRONIA	--	--	--	--	--	--
..SIALIDAE	--	--	--	--	--	--
..SIALIS	--	--	--	--	--	--
ODONATA						
..AESHNIDAE						
..AESHNA	--	--	--	--	--	1
..COENAGRIONIDAE						
..ARGIA	--	1	--	--	--	--
..GOMPHIDAE	--	--	--	--	--	1
..GOMPHUS	--	--	--	--	--	--
..LANTHUS	--	--	--	--	1	--
..UNKNOWN GENUS	--	--	--	--	--	--
PLECOPTERA						
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..CAPNIDAE	--	--	--	--	--	--
..ALLOCAPNIA	--	--	--	--	--	--
..PERLIDAE	--	--	--	--	--	--
..ACRONURIA	--	--	--	--	--	1
..PARACNETINA	--	--	--	--	--	--
..TAENIOPTERYGIDAE	--	--	--	--	--	--
..TAENIOPTERYX	--	--	--	--	--	--
..STROPHOPTERYX	--	--	--	--	--	--
TRICHOPTERA						
..GLOSSOSOMATIDAE	--	--	--	--	7	2
..GLOSSOSOMA	--	--	--	--	--	--
..HELICOPSYCHIDAE	--	--	--	--	--	534
..HELICOPSYCHE	--	--	--	--	--	--
..HYDROPSYCHIDAE	--	--	--	--	--	--
..CHEUMATOPSYCHE	1	15	16	--	44	40
..HYDROPSYCHE	14	35	10	9	239	--
..POTAMIA	--	--	--	--	--	--
..SYMPHYTOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE	--	--	--	--	--	3
..LEUCOTRICHIA	--	--	--	--	--	--
..OCHROTRICHIA	--	--	--	--	--	--
..LIMNAPHILIDAE	--	--	--	--	--	--
..GOERA	--	--	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--	--	--
..CHIMARRA	--	--	--	--	25	12
..DOLOPHILODES	--	--	--	--	--	--
..WORMALDIA	--	--	--	--	--	--
..POLYCENTROPIDIDAE	--	--	--	--	--	--
..POLYCENTROPUS	--	--	--	--	--	--
..PSYCHOMYIIDAE	--	9	--	--	--	--
..PSYCHOMYIA	--	--	--	--	--	--
..RHYACOPHILIDAE	--	--	--	--	--	--
..RHYACOPHILA	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE	--	--	--	--	--	--
..FERRISSIA	--	--	--	--	--	--
..LYMNAEIDAE	--	--	--	--	--	--
..LYMNAEA	--	--	--	--	--	--
PLATYHELMINTHES (PLATWORMS)						
..TURBELLARIA						
..TRICLADIA						
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--

DATE TIME	01472174 PICKERING CREEK NEAR CHESTER SPRINGS, PA.					
	OCT 23 74 0000	OCT 21 78 1000	OCT 19 77 1030	OCT 30 78 1330	NOV 1 79 1530	OCT 30 80 1030
TOTAL COUNT	173	531	180	88	83	132
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	2	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	5	3	--	--	--
..CRUSTACEA	--	--	--	--	--	--
..AMPHIPODA	--	--	--	--	--	--
..ISOPODA	--	--	--	--	--	--
..ASELLIDAE	--	4	--	--	--	--
..ASELLUS	--	--	--	--	--	--
..INSECTA						
..COLEOPTERA						
..ELMIDAE	--	1	--	--	--	--
..DURIPHIA	--	1	--	--	--	--
..MACRONYCHIUS	--	61	--	--	--	--
..OULIMNIUS	14	12	1	1	8	--
..STENELMIS	--	12	23	1	--	--
..PSEPHENIDAE	--	--	--	--	--	--
..ECTOPRIA	--	--	--	--	--	--
..PSEPHENUS	2	1	5	--	2	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	1	--	--	--	--
..DIPTERA						
..ATHERICIDAE=RHAGIONIDAE	--	--	--	--	2	--
..ATHERIX	--	--	--	--	--	--
..CHIRONOMIDAE	--	--	1	--	--	--
..ADLABESWIA	--	--	--	--	--	--
..CONCHAPELOPIA	--	9	--	--	2	--
..CORYNONEURA	--	5	--	--	--	--
..CRICOTOPUS	--	--	2	--	--	23
..EUKIEFFERIELLA	--	15	--	--	--	--
..OLIGOTENDIPES	--	12	4	3	2	17
..OPTICULADIS	--	--	--	--	--	--
..PARAMETRIOCNEMUS	--	--	3	--	1	--
..PSECTROCLADIUS	--	--	--	--	--	--
..RHEOTANYTARSUS	--	16	3	--	1	1
..THIENEMANNIELLA	--	16	--	--	--	--
..EMPIDIDAE	--	--	--	--	--	--
..HEMERODROMIA	1	1	--	--	--	--
..MUSCIDAE	--	--	--	--	--	--
..LIMNORHORA	--	--	--	--	--	--
..SIMULIIDAE	--	--	--	--	--	--
..SIMULIUM	1	--	--	--	1	--
..TIPULIDAE	--	--	--	--	--	--
..ANTOCHA	2	20	1	2	1	37
..DICRANOTA	--	1	--	--	1	--
..HEPATOMA	--	--	--	1	--	--
..HEPIL	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	1	--
..EPHEMEROPTERA						
..BAETIDAE	1	--	4	1	--	--
..BAETIS	--	--	--	--	--	--
..EPHEMERELLIDAE	5	78	--	--	4	--
..EPHEMERELLA	--	--	--	--	--	--
..HEPTAGENIIDAE	2	36	34	1	11	17
..STENOMEA	--	--	--	--	--	--
..LEPTOPHLEBIIDAE	--	1	--	--	--	--
..PARALEPTOPHLEBIA	--	--	--	--	--	--
..SIPHONURIDAE	--	2	--	--	1	--
..ISONYCHIA	--	--	--	--	--	--
..TRICORYTHIDAE	--	1	--	--	--	--
..TRICORYTHODES	--	--	--	--	--	--
..LEPIDOPTERA	--	--	--	--	--	--
..MEGALOPTERA	--	--	--	--	--	--
..CORYDALIDAE	--	--	--	--	--	--
..NIGRONIA	--	1	--	--	--	--
..SIALIDAE	--	--	--	--	1	--
..STALIS	--	--	--	--	--	--
..ODONATA						
..AESHNIDAE	--	--	--	--	--	--
..AESHNA	--	--	--	--	--	--
..COENAGRIONIDAE	--	--	--	--	--	--
..ARGIA	--	--	--	--	--	--
..GOMPHIDAE	--	--	1	--	--	--
..GOMPHUS	--	--	--	--	--	--
..LANTHUS	--	1	--	--	--	--
..UNKNOWN GENUS	--	1	--	--	--	--
..PLECOPTERA						
..UNKNOWN FAMILY	--	1	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..CAPNIDAE	--	--	--	--	1	--
..ALLOCAPNIA	--	--	--	--	--	--
..PERLLIDAE	--	--	1	--	--	1
..ACHONEURIA	--	--	--	--	--	--
..PARAGRETTINA	--	--	--	--	--	--
..TAENIOPTERYGIDAE	--	11	27	--	3	--
..TAENIOPTERYX	--	--	--	--	--	--
..TRICHOPTERA						
..GLOSSOSOMATIDAE	3	21	2	--	1	--
..HELICOPSYCHIDAE	--	--	--	--	--	--
..HELICOPSYCHE	104	--	--	--	--	--
..HYDROPSYCHIDAE	--	13	18	4	10	--
..CHEUMATOPSYCHE	28	145	41	52	12	27
..HYDROPSYCHE	--	--	15	--	--	--
..POTAMYIA	--	--	--	18	3	--
..SYMPHYTOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE	--	1	--	--	--	--
..LEUCOTRICHIA	--	3	--	--	--	--
..OCYROTRICHIA	--	--	--	--	--	--
..LIMNIPHILIDAE	--	1	--	--	--	--
..GOERA	--	--	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--	--	--
..CHIMARA	11	20	--	3	14	--
..DOLOPHILODES	--	--	--	1	--	--
..FORMALDIA	--	--	--	--	--	--
..POLYCENTROPIDAE	--	1	--	--	--	--
..POLYCENTROPUS	--	--	--	--	--	--
..PSYCHOMYIA	--	5	--	--	--	--
..RHYACOPHILIDAE	--	1	--	--	--	--
..RHYACOPHILA	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE	1	1	3	--	--	7
..FERRISSIA	--	--	--	--	--	--
..LYMNAEIDAE	--	--	--	--	--	2
..LYMNAEA	--	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA	--	5	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--

Table 3.--Benthic invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	014721854		PICKERING CREEK AT MERLIN, PA			
	MAY 5 70 0000	SEP 28 70 0000	MAY 3 71 0000	SEP 27 71 0000	OCT 3 72 0000	OCT 2 73 0000
TOTAL COUNT	85	79	46	71	119	560
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
..CRUSTACEA						
..ISOPODA						
..ASELLIDAE	--	--	--	--	--	--
..LIRCEUS						
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
..DUBIRAPHIA	--	--	--	--	--	--
..OPTIOSERVUS	--	--	--	--	0	21
..OULIMNIUS	--	--	--	--	2	--
..PROMOREZIA	--	--	--	--	--	--
..STENELMIS	--	--	--	--	1	27
..PSEPHENIDAE	--	--	--	--	--	--
..PSEPHENUS	--	--	--	--	1	5
..DIPTERA						
..ATHERICIDAE=RHAGIONIDAE						
..ATHERIX	--	--	--	--	--	3
..CHIRONOMIDAE	2	3	--	--	6	2
..BRILLIA	--	--	--	--	--	--
..ONCHAELOPIA	--	--	--	--	--	--
..CRICOTOPIUS	--	--	--	--	--	--
..EUKIEFFERIELLA	--	--	--	--	--	--
..MICROPSPECTRA	--	--	--	--	--	--
..ORTHOCCLADIUS	--	--	--	--	--	--
..PARAMETRIOCNEMUS	--	--	--	--	--	--
..POLYPEDILUM	--	--	--	--	--	--
..RHEOTANYTARSUS	--	--	--	--	--	--
..SMITTIA	--	--	--	--	--	--
..TANYTARSUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	--	--
..EMPIDIDAE	--	--	--	--	1	--
..HEMERODROMIA	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..SIMULIIDAE						
..SIMULIUM	1	2	--	--	7	1
..TIPULIDAE						
..ANTOCHA	4	--	--	--	1	1
..DICRANOTA	--	--	--	--	--	1
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	4	14	--	--	9	2
..PSEUDOCLOFON	--	--	--	--	--	--
..EPHEMERELLIDAE	--	--	--	--	--	--
..EPHEMERELLA	14	--	--	11	5	0
..HEPTAGENIIDAE						
..EPEORUS	3	2	--	--	8	2
..STENONEMA	4	--	--	9	--	--
..SPHILONURIDAE						
..ISONYCHIA	--	--	--	--	1	0
..HEMIPTERA						
..GERRIDAE	--	--	--	--	2	1
..LEPIDOPTERA						
..MEGALOPTERA						
..CORDYLIDAE						
..CORDYLALUS	--	2	--	--	--	--
..NIGRONIA	--	--	--	--	1	--
..SIALIDAE	--	--	--	--	--	--
..SIALIS	--	--	--	--	--	--
..PLECOPTERA						
..PERLIDAE						
..ACRONEURIA	--	6	2	1	2	9
..PARAGNETTINA	--	--	--	--	10	--
..TAENIOPTERYGIDAE	--	--	--	--	--	--
..TAENIOPTERYX	--	--	--	--	--	--
..TRICHOPTERA						
..BRACHYCENTRIDAE						
..BRACHYCENTRUS	1	--	--	--	1	--
..MICRASEMA	--	--	--	--	--	--
..GLOSSOSOMATIDAE	--	--	10	--	--	4
..GLOSSOSOMA	--	--	--	--	--	--
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE	10	14	14	14	15	104
..HYDROPSYCHE	42	21	20	21	34	355
..MACRONEMA	--	--	--	--	1	2
..SYMPHYTOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE						
..HYDROPTILA	--	--	--	--	--	--
..LEUCOTRICHIA	--	--	--	--	--	1
..OCHROTRICHIA	--	--	--	--	--	--
..LEPTOCERIDAE						
..OECETIS	--	--	--	--	1	--
..LIMNAPHILIDAE						
..APATANIA	--	--	--	--	--	--
..GOERA	--	--	--	--	--	--
..MOLANNIDAE						
..MOLANNA	--	4	--	4	--	14
..PHILOPOTAMIDAE	--	--	--	--	6	3
..CHIMARRA	--	--	--	--	--	--
..POLYCENTROPIDIDAE						
..NYCTIOPHYLAX	--	--	--	--	1	--
..POLYCENTROPUS	--	--	--	--	--	--
..PSYCHOMYIIDAE						
..PSYCHOMYIA	--	11	--	11	2	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE	--	--	--	--	--	--
..FERRISSIA	--	--	--	--	--	--
..PHYSIDAE	--	--	--	--	--	--
..PHYSA	--	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE	--	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--

014721854 PICKERING CREEK AT MERLIN, PA						
DATE	OCT 23, 74	OCT 22, 76	OCT 19, 77	OCT 30, 78	NOV 5, 79	OCT 30, 80
TIME	0000	0815	1130	1500	1500	0900
TOTAL COUNT	128	1660	547	62	47	1334
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	5	3	--	--	7
..CRUSTACEA						
..ISOPODA						
..ASELLIDAE	--	--	--	1	--	--
..LIRCEUS	--	--	--	1	--	--
..LIRCEUS	--	--	--	1	--	--
..INSECTA						
..COLEOPTERA						
..ELMIDAE	--	1	--	--	--	--
..DUBIRAPHIA	--	28	23	--	2	1
..OPTIOSERVUS	3	3	--	--	1	--
..OULIMNIUS	--	--	--	--	--	2
..PROMOREZIA	--	3	5	--	--	--
..STENELMIS	2	--	--	--	--	--
..PSEPHENIDAE	--	1	--	--	--	--
..PSEPHENUS	1	--	--	--	--	--
..DIPTERA						
..ATHERICIDAE=RHAGIONIDAE						
..ATHERIX	2	5	--	--	--	--
..CHIRONOMIDAE	17	--	--	--	--	--
..BRILLIA	--	--	--	--	--	1
..CONCHAPELOPIA	--	10	--	--	--	--
..CRICOTOPUS	--	5	15	--	1	8
..EUKIEFFERIELLA	--	2	4	--	--	--
..MICROPSECTRA	--	--	3	--	--	--
..ORTHOCCLADIUS	--	--	--	--	12	37
..PARAMETRICNEMUS	--	--	--	--	--	1
..POLYPEDILUM	--	--	--	--	1	--
..RHEOTANYTARSUS	--	8	1	--	--	29
..SMITTIA	--	2	--	--	--	--
..TANYTARSUS	--	--	--	--	2	--
..THIENEMANNIELLA	--	2	--	--	--	--
..EMPIDIDAE	--	--	--	--	--	--
..HEMERODROMIA	2	1	--	--	--	1
..UNKNOWN GENUS	--	--	--	--	--	1
..SIMULIIDAE	--	--	4	--	--	5
..SIMULIUM	--	--	--	--	--	--
..TIPULIDAE	--	--	--	--	--	--
..ANTOCHA	7	19	11	6	3	27
..DICRANOTA	--	--	--	--	1	--
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	--	--	--	--	--	--
..PSEUDOCLODON	--	--	1	--	--	1
..EPHEMERELLIDAE	--	--	--	--	--	--
..EPHEMERELLA	--	20	2	--	3	15
..HEPTAGENIIDAE	--	--	--	--	--	--
..EPEORUS	--	--	5	--	2	28
..STENONEMA	--	4	--	--	--	--
..SIPHONURIDAE	--	--	--	--	--	--
..ISONYCHIA	--	2	11	4	--	30
..HEMIPTERA						
..GERRIDAE	--	--	--	--	--	--
..LEPIDOPTERA	--	--	--	--	--	--
..MEGALOPTERA						
..CORYDALIDAE	--	--	--	--	--	--
..CORYDALUS	--	3	--	--	--	1
..NIGRONIA	--	1	--	--	--	1
..SIALIDAE	--	--	--	--	--	--
..SIALIS	--	--	--	--	--	1
..PLECOPTERA						
..PERLIDAE						
..ACRONEURIA	--	4	--	--	2	--
..PARAGNETINA	4	3	1	--	--	1
..TAENIOPTERYGIDAE	--	--	--	--	--	--
..TAENIOPTERYX	--	3	20	--	8	28
..TRICHOPTERA						
..BRACHYCENTRIDAE	--	--	--	--	--	--
..BRACHYCENTRUS	--	--	--	--	--	--
..MICRASEMA	--	40	--	--	--	70
..GLOSSOSOMATIDAE	--	--	--	--	--	--
..GLOSSOSOMA	--	6	4	--	--	6
..HYDROPSYCHIDAE	--	--	--	--	--	--
..CHEUMATOPSYCHE	22	732	273	--	--	140
..HYDROPSYCHE	59	612	143	38	--	12
..MACRONEMA	2	18	--	--	--	--
..SYMPHITOPSYCHE	--	--	--	8	4	848
..HYDROPTILIDAE	--	--	2	--	--	3
..HYDROPTILA	--	--	--	--	1	6
..LEUCOTRICHIA	--	--	--	--	--	--
..OCHROTRICHIA	--	2	--	--	--	--
..LEPTOCERIDAE	--	--	--	--	--	--
..OECETIS	--	--	--	--	--	--
..LIMNephilidae	--	--	--	--	--	--
..APATANIA	--	--	3	--	--	--
..GOERA	--	1	1	--	--	1
..MOLANNIDAE	--	--	--	--	--	--
..MOLANNA	--	--	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--	--	--
..CHIMARRA	3	113	6	1	--	9
..POLYCENTROPIDAE	--	--	--	--	--	--
..NYCTIOPHYLAX	--	--	--	--	--	--
..POLYCENTROPUS	--	--	--	--	--	--
..PSYCHOMYIIDAE	--	--	--	--	--	--
..PSYCHOMYIA	--	--	2	--	2	5
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE	2	--	3	4	2	7
..FERRISSIA	--	--	--	--	--	--
..PHYSIDAE	--	--	--	--	--	--
..PHYSA	--	--	--	--	--	2
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE	2	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	1	--	--	--	--

Table 3.-Penthic-invertebrate data  
[double dash indicates organism not present in sample]

	014721884	PICKERING CR AT CHARLESTOWN RD BR. AT CHARLESTOWN, PA		
DATE	OCT 3 72	OCT 1 73	OCT 23 74	OCT 22 76
TIME	0000	0000	0000	0945
TOTAL COUNT	483	103	415	740
ORGANISM	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
..HYDRACARINA				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	--	3
..INSECTA				
..COLEOPTERA				
..ELMIDAE				
..DUBIRAPHIA	--	--	--	2
..OPTIOSERVUS	--	--	2	4
..OULIMNIUS	--	--	--	1
..STENELMIS	1	1	--	1
..PSEPHENIDAE	--	--	--	--
..PSEPHENUS	--	--	--	--
..DIPTERA				
..CHIRONOMIDAE	55	1	35	--
..CARDIOCLADIUS	--	--	--	--
..CRICOTOPUS	--	--	--	10
..EUKITTESMA	--	--	--	21
..MICROTENDIPES	--	--	--	--
..ORTHOCLADIUS	--	--	--	--
..RHEOTANTYARSUS	--	--	--	8
..THIENEMANNIELLA	--	--	--	2
..EMPIDIDAE				
..HEMERODROMIA	--	--	--	2
..SIMULIIDAE				
..SIMULIUM	2	4	2	32
..TIPULIDAE				
..ANTOCHA	1	1	6	13
..EPHEMEROPTERA				
..BAETIDAE				
..BAETIS	23	2	--	--
..PSEUDOCLOEON	--	--	--	--
..EPHEMERELLIDAE				
..EPHEMERELLA	8	--	11	10
..HEPTAGENIIDAE				
..STENONEMA	9	1	1	8
..SIPHONURIDAE				
..ISONYCHIA	20	1	3	3
..MEGALOPTERA				
..CORDYLIDAE				
..CORDYLUS	2	--	1	3
..C. CORNUATUS	--	--	--	--
..NIGRONIA	--	--	--	1
..ODONATA				
..COENAGRIONIDAE				
..UNKNOWN GENUS	--	--	--	--
..PLECOPTERA				
..PERLIDAE				
..ACRONEURIA	4	--	--	--
..PARAGNETINA	2	--	--	--
..TAENIOPTERYGIDAE				
..TAENIOPTERYX	--	--	--	2
..TRICHOPTERA				
..BRACHYCENTRIDAE				
..MICRASEMA	--	--	--	1
..GLOSSOSOMATIDAE				
..GLOSSOSOMA	3	--	1	--
..HYDROPSYCHIDAE				
..CHEUMATOPSYCHE	101	10	63	208
..HYDROPSYCHE	248	82	204	339
..SYMPHITOPSYCHE	--	--	--	--
..HYDROPTILIDAE				
..HYDROPTILA	--	--	--	--
..LEUCOTRICHIA	3	--	1	1
..OCHROTRICHIA	--	--	--	2
..LEPTOCERIDAE				
..NECTOPSYCHE	--	--	--	--
..LIMNephilidae				
..APATANIA	--	--	--	--
..PHILOPOTAMIDAE				
..CHIMARRA	3	--	24	8
..POLYCENTROPODIDAE				
..CYRNELLUS	--	--	--	--
..POLYCENTROPUS	--	--	--	--
..PSYCHOMYIIDAE				
..PSYCHOMYIA	--	--	2	1
MOLLUSCA (MOLLUSCS)				
..BIVALVIA				
..NUCULOIDAE				
..SPHARIIDAE				
..SPHARIUM	--	--	--	2
..GASTROPODA				
..BASOMMATOPHORA				
..ANCYLIDAE				
..PERISSIA	--	--	1	1
..LYMNAEIDAE	--	--	1	2
..LYMNAEA	--	--	--	--
..MESOGASTROPODA				
..VIVIPARIDAE	--	--	--	--
..AMNICOLA				
PLATYHELMINTHES (FLATWORMS)				
..TURBELLARIA				
..TRICLADIDA				
..PLANARIIDAE	--	--	57	--
..UNKNOWN GENUS	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--
..UNKNOWN GENUS	--	--	--	51

	014721884	PICKERING CR AT CHARLESTOWN RD BR. AT CHARLESTOWN, PA		
DATE	OCT 19 77	OCT 30 78	OCT 29 79	OCT 29 80
TIME	1200	1530	1400	1440
TOTAL COUNT	862	251	232	2864
ORGANISM	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
..HYDRACARINA				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	1	--	--
..INSECTA				
..COLEOPTERA				
..ELMIDAE	1	--	--	--
..DUBIRAPHIA	--	--	--	--
..OPTIOSERVUS	--	--	--	--
..OULIMNIUS	--	--	--	--
..STENELMIS	4	--	--	18
..PSEPHENIDAE				
..PSEPHENUS	1	--	--	--
..DIPTERA				
..CHIRONOMIDAE	--	--	--	--
..CARDIOCLADIUS	--	1	--	--
..CRICOTOPUS	34	--	--	80
..EUKISOPHRIELLA	--	4	1	96
..MICROTENDIPES	--	2	--	--
..ORTHOCCLADIUS	--	7	120	48
..RHEOTANYTARSUS	19	2	--	384
..THIENEMANNIELLA	--	--	--	--
..EMPTIIDAE				
..HEMERODROMIA	--	--	--	16
..SIMULIIDAE				
..SIMULIUM	2	--	3	16
..TIPULIDAE				
..ANTOCHETUS	20	4	13	160
..EPHEMEROPTERA				
..BAETIDAE				
..BAETIS	1	--	--	18
..PSEUDOCLOEON	--	--	1	--
..EPHEMERELLIDAE				
..EPHEMERELLA	12	2	2	98
..HEPTAGENIIDAE				
..STENONEMA	13	4	7	64
..SIPHONURIDAE				
..ISONYCHIA	45	8	2	240
..MEGALOPTERA				
..CORYDALIDAE				
..CORYDALUS	--	--	--	16
..C. CORNUTUS	2	--	--	--
..NIGRONIA	--	--	--	--
..ODONATA				
..COENAGRIONIDAE				
..UNKNOWN GENUS	1	--	--	--
..PLECOPTERA				
..PERLIDAE				
..ACRONEURIA	--	--	1	--
..PARAGNETINA	1	--	2	16
..TAENIOPTERYGIDAE				
..TAENIOPTERYX	5	--	1	80
..TRICHOPTERA				
..BRACHYCENTRIDAE				
..MICRASEMA	--	--	--	64
..GLOSSOSOMATIDAE				
..GLOSSOSOMA	--	3	1	16
..HYDROPSYCHIDAE				
..CHEUMATOPSYCHE	379	20	5	256
..HYDROPSYCHE	271	69	13	960
..SYMPHITOPSYCHE	--	116	50	--
..HYDROPTILIDAE				
..HYDROPTILA	3	--	1	48
..LEUCOTRICHIA	3	--	--	80
..OCHROTRICHIA	--	--	--	--
..LEPTOCERIDAE				
..NECTOPSYCHE	--	--	--	16
..LIMNAPHILIDAE				
..APATANIA	14	--	--	--
..PHILOPOTAMIDAE				
..CHIMARRA	--	7	4	32
..POLYCENTROPIDAE				
..CYRNELLUS	--	--	--	18
..POLYCENTROPUS	--	1	--	32
..PSYCHOMYLIDAE				
..PSYCHOMYIA	25	--	--	--
MOLLUSCA (MOLLUSCS)				
..BIVALVIA				
..NUCULOIDEA				
..SPHAERIIDAE				
..SPHAERIUM	--	--	--	--
..GASTROPODA				
..BASOMMATOPHORA				
..ANCYLIDAE				
..FERRISSIA	5	--	2	--
..LYMNAEIDAE				
..LYMNAEA	1	--	--	--
..MESOGASTROPODA				
..VIVIPARIDAE				
..AMNICOLA	--	--	1	--
PLATYHELMINTHES (FLATWORMS)				
..TURBELLARIA				
..TRICLADIDA				
..PLANARIIDAE	--	--	--	--
..UNKNOWN GENUS	--	--	2	--
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	--	--

Table 3.--Benthic-invertebrate data--Continued  
[Double dash indicates organism not present in sample]

DATE TIME	01472190 PICKERING CREEK NEAR PHOENIXVILLE, PA.					
	MAY 5 70 0000	SEP 28 70 0000	MAY 3 71 0000	SEP 27 71 0000	OCT 3 72 0000	OCT 1 73 0000
TOTAL COUNT	38	127	63	7	241	166
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..PLESIOPORA						
..TUBIFICIDAE						
..UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
..CRUSTACEA						
..DECAPODA						
..ASTACIDAE						
..UNKNOWN GENUS	--	--	--	--	--	--
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
..DUBIAPHIA						
..OPTIOSERVUS	--	--	--	--	1	--
..OULIMNIUS	--	--	--	--	--	--
..STENELIS	--	--	--	--	--	--
..PSEPHENIDAE	--	--	--	--	--	--
..PSEPHENUS	--	--	--	--	--	1
..DIPTE						
..CHIRONOMIDAE	5	3	39	--	38	4
..ABLABESMYIA	--	--	--	--	--	--
..CARDIOCLADIUS	--	--	--	--	--	--
..CONCHAELOPIA	--	--	--	--	--	--
..CHICOTOPUS	--	--	--	--	--	--
..EUKIFFERIELLA	--	--	--	--	--	--
..LINNOCHIRONOMUS	--	--	--	--	--	--
..METRICENMUS	--	--	--	--	--	--
..MICROTENDIPES	--	--	--	--	--	--
..ORTHOCLADIUS	--	--	--	--	--	--
..POLYPEDILUM	--	--	--	--	--	--
..RHOTANYTARSUS	--	--	--	--	--	--
..SYNORHOCLADIUS	--	--	--	--	--	--
..HIEMEMANNIELLA	--	--	--	--	--	--
..EMPIDIDAE	--	--	--	--	2	--
..HEMIPRODROMIA	--	--	--	--	--	--
..SIMULIDAE	--	--	--	--	--	4
..SIMULIUM	--	--	--	--	--	--
..TIPULIDAE	--	--	--	--	--	--
..ANTOC	2	1	--	--	2	1
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	1	13	--	--	22	3
..PSEUDOCLOEON	--	--	--	--	--	--
..EPHEMERELLIDAE	--	--	--	--	--	--
..EPHEMERELLA	--	1	3	--	1	--
..HEPTAGENIIDAE	--	--	--	--	--	--
..EPEORUS	4	--	--	--	--	--
..STENONEMA	5	10	--	3	25	9
..SIPHONURIDAE	--	--	--	--	--	--
..ISONCHIA	--	--	--	--	3	1
..LEPIDOPTERA						
..PYRALIDIDAE	--	--	--	--	--	--
..NYMPHULA	--	--	--	--	--	--
..PARARGYACTIS	--	--	--	--	--	--
..ODONATA						
..COENAGRIONIDAE	--	--	--	--	--	--
..APRIAGRION	--	1	--	--	--	--
..ARGIA	--	--	--	--	--	--
..SCHNURA	--	--	--	--	--	--
..PLECOPTERA						
..CAPNIIDAE	--	--	--	--	--	--
..ALLOCAPNIA	--	--	--	--	--	--
..PERLIDAE	--	--	--	--	--	--
..ACROHEURIA	--	4	--	--	6	--
..TAENIOPTERYGIDAE	--	--	--	--	--	--
..TAENIOPTERYX	--	--	--	--	--	--
..TRICHOPTERA						
..BRACHYCENTRIDAE	--	--	--	--	--	--
..MICRASOMA	--	--	--	--	--	--
..GLOSSOSOMATIDAE	--	--	--	--	--	--
..GLOSSOSOMA	--	--	--	--	7	--
..HYDROPSYCHIDAE	--	--	--	--	--	--
..CHEUMATOPSYCHE	6	17	7	--	61	38
..HYDROPSYCHE	14	37	11	4	54	80
..MACRONEMA	--	--	--	--	--	--
..SYMPHYTOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE	--	--	--	--	--	--
..HYDROPTILA	--	--	--	--	--	--
..LEUCOTRICHIA	--	--	--	--	15	2
..LEPIDOSTOMATIDAE	--	--	--	--	--	--
..LEPIDOSTOMA	--	--	--	--	--	--
..LEPTOCERIDAE	--	--	--	--	--	--
..NECTOPSYCHE	--	--	--	--	--	--
..LINNAPHILIDAE	--	--	--	--	--	--
..GOERA	--	--	--	--	--	--
..MOLANNIDAE	--	--	--	--	--	--
..MOLANNA	--	40	--	--	--	--
..PHILOPSAMIDAE	--	--	--	--	--	--
..CHIMARRIA	1	--	3	--	1	3
..DOLOPHILODES	--	--	--	--	--	--
..POLYCENTROPIDAE	--	--	--	--	--	--
..CENTRIPUS	--	--	--	--	--	--
..NEURECLIPSIS	--	--	--	--	--	--
..NYCTIOPHYLAX	--	--	--	--	1	--
..PHYLOCENTROPUS	--	--	--	--	--	--
..POLYCENTROPUS	--	--	--	--	--	--
..PSYCHOMYIIDAE	--	--	--	--	--	--
..PSYCHOMYIA	--	--	--	--	1	--
..RHACOPHYIIDAE	--	--	--	--	--	--
..RHACOPHYLLA	--	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..BIVALVIA						
..MUCULOIDEA						
..SPHAERIIDAE						
..SPHAERIUM	--	--	--	--	--	--
GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE	--	--	--	--	--	--
..FERRISSE	--	--	--	--	--	--
..PHYSIDAE	--	--	--	--	--	--
..PHYSA	--	--	--	--	--	--
..PLANORBIDAE	--	--	--	--	--	--
..GYRAULUS	--	--	--	--	--	--
..MESOGASTROPODA						
..HYDROBIDAE	--	--	--	--	--	--
..AMNICOLA	--	--	--	--	--	--
..VIVIPARIDAE	--	--	--	--	--	--
..CAMPELONA	--	--	--	--	--	--
NEMATODA (NEMATODES)						
..UNKNOWN CLASS						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA	--	--	--	--	--	--
..PLANARIIDAE	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--



01472190 PICKERING CREEK NEAR PHOENIXVILLE, PA.						
DATE	NOV 3, 75	OCT 22, 76	OCT 19, 77	OCT 30, 78	OCT 29, 79	OCT 30, 80
TIME	1400	1030	1415	1600	1515	1445
TOTAL COUNT	375	906	318	237	85	520
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..PLATYPODIA						
..TUBIFICIDAE						
...UNKNOWN GENUS	--	3	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
...UNKNOWN FAMILY						
..UNKNOWN GENUS	--	4	1	3	--	--
..CRUSTACEA						
..DECAPODA						
..ASTACIDAE						
...UNKNOWN GENUS	--	1	--	--	--	--
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
..DUBIRAPHIA	--	3	--	--	--	--
..OPTIOSERVUS	--	4	--	--	--	4
..OULIMYUS	--	--	--	1	--	--
..STENELMIS	--	5	--	1	--	--
..PSEPHENIDAE						
..PSEPHENUS	1	1	1	--	--	4
..DIPTERA						
..CHIRONOMIDAE	--	--	--	--	--	--
..BIARESMYIA	2	--	--	--	--	--
..CARDIOTELLADUS	8	--	--	--	--	8
..CONCHAELOPIA	--	--	--	--	--	--
..CRICOTOPUS	10	37	--	12	--	8
..EUNIEFFERIELLA	5	--	5	2	--	--
..LIMNOCHIRONOMUS	--	--	--	--	--	4
..METRICOMENUS	--	--	5	--	--	--
..MICROTENDIPES	--	--	--	1	--	20
..ORTHOCADUS	--	--	--	1	37	8
..POLYPEDILUS	--	--	--	--	--	--
..RHEOTANYTARSUS	18	15	5	20	--	8
..SYNORTHOCADUS	--	--	--	--	--	6
..THIENEMANNIELLA	1	5	--	1	1	--
..EMPIDIDAE	--	--	--	--	--	--
..HEMERODROMIA	--	1	--	4	--	--
..SIMULIIDAE						
..SIMULIUM	1	7	--	1	1	--
..TULIDAE						
..ANTOCHA	41	40	13	8	4	40
..EPHEMEROPTERA						
..BATTIS	2	1	--	--	--	--
..PSEUDOCLOEON	--	--	--	--	--	--
..EPHEMERELLIDAE						
..EPHEMERELLA	32	27	9	6	--	40
..HEPTAGENIIDAE	--	--	--	--	--	--
..EPEORUS	--	--	--	--	--	--
..STENONEMA	24	39	15	7	5	60
..SIPHONURIDAE	--	--	--	--	--	--
..ISCYNELLA	--	12	20	17	1	12
..LEPIDOPTERA						
..PYRALIDAE						
..NYMPHULA	--	--	4	--	--	--
..PARARGYACTIS	--	--	--	--	--	4
..ODONATA						
..CDEENAGRIONIDAE						
..AMPHIAGRION	--	1	--	--	--	--
..ARGIA	--	--	--	--	--	--
..ISCHINURA	--	--	1	--	--	--
..PLECOPTERA						
..CAPNIDAE						
..ALLOCAPNIA	--	--	--	--	1	--
..PERLIDAE						
..ACHONEURIA	1	1	1	--	--	--
..TAENIOPTERYGIDAE						
..TACHIOPTERYX	--	6	12	1	--	--
..TRICHOPTERA						
..BRACHYCENTRIDAE						
..GLAUSSOMYIA	3	10	--	4	--	8
..GLAUSSOMATIDAE						
..GLAUSSOSOMA	6	9	1	5	--	--
..HYDROPSYCHIDAE						
..CHEIMATOPSYCHE	103	186	76	38	--	12
..HYDROPSYCHE	91	488	118	17	5	104
..MACRONEMA	--	--	--	2	--	--
..SYMPHYTOPSYCHE	--	--	--	74	24	--
..HYDROPTILIDAE						
..HYDROPTILIA	--	--	--	1	--	32
..EUCOTRICHIA	17	8	--	--	--	16
..LEPIDOSTOMATIDAE						
..LEPIDOSTOMA	2	--	--	--	--	--
..LEPTOCERIUM	--	--	--	--	--	--
..NECTOPSYCHE	--	--	--	--	--	4
..LIMNephilidae						
..GOERA	--	--	--	--	--	--
..UNKNOWN GENUS	2	--	1	--	--	--
..MOLANIDAE						
..MOLANNA	--	--	--	--	--	--
..PHILOPOTAMIDAE						
..CRIMARIA	3	1	1	5	--	4
..DOLOPHIODES	--	--	--	--	1	--
..POLYCENTROPIDAE						
..CYNELLUS	--	--	--	--	--	48
..NEURECLIPSIS	--	--	1	--	--	--
..NYCTOPHYLAX	--	--	--	2	--	32
..PHILOCENTROPUS	--	--	2	--	--	--
..POLYCENTROPUS	--	--	--	--	--	12
..PSYCHOMYIA						
..PSYCHOMYIA	2	1	--	--	--	--
..RHYNACOPHILIDAE						
..RHYNACOPHILA	--	--	1	--	--	--
..UNKNOWN FAMILY	--	--	1	--	--	--
..UNKNOWN GENUS	--	--	1	--	--	--
MOLLUSCA (MOLLUSCS)						
..BIVALVIA						
..NUCULOIDEA						
..SPHAERIIDAE						
..SPHAERIUM	--	1	--	--	--	--
..GASTROPODA						
..BASOMMATOPHORA						
..ANCLIOIDEA						
..FERRISSIA	--	2	22	--	1	16
..PHYSIDAE	--	--	--	1	--	--
..PHYSIDAE	--	--	--	--	--	--
..PLANORBIDAE						
..CYBAEUS	--	--	1	--	--	--
..MESOCARPOPODA						
..HYDROBIIDAE						
..AMNICOLA	--	1	--	--	--	--
..VIVIPARIDAE	--	--	--	--	--	--
..CAMPELOMA	--	--	1	--	--	--
NEMATODA (NEMATODES)						
..UNKNOWN CLASS						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	2	--
PLATHELMINTHES (PLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE	--	--	--	--	2	4
..UNKNOWN GENUS	--	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	6	--	--	--	--

Table 3.--Benthic-invertebrate data--Continued  
 [double dash indicates organism not present in sample]  
 01473167 LITTLE VALLEY CREEK AT HOWELLVILLE, PA.

DATE TIME	OCT 12 73 0000	NOV 11 75 0900	OCT 29 76 0900	OCT 31 77 0000
TOTAL COUNT	29	988	449	279
ORGANISM	COUNT	COUNT	COUNT	COUNT
ANNELIDA				
..OLIGOCHAETA				
..PLESIOPORA				
..NAIDIDAE				
..UNKNOWN GENUS	--	--	100	--
..TUBIFICIDAE	--	--	--	--
..UNKNOWN GENUS	--	--	--	--
..UNKNOWN ORDER	--	--	--	--
..UNKNOWN FAMILY	--	--	--	2
..UNKNOWN GENUS	--	--	--	--
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
..HYDRACARINA				
..UNKNOWN FAMILY	--	--	1	--
..UNKNOWN GENUS	--	--	--	--
..CRUSTACEA				
..AMPHIPODA				
..GAMMARIDAE				
..GAMMARUS	1	20	--	4
..ISOPODA				
..ASELLIDAE	--	2	--	8
..ASELLUS	--	--	--	--
..LIRCEUS	--	--	--	--
..INSECTA				
..COLEOPTERA				
..ELMIDAE	--	--	1	1
..OPTIOSERVUS	--	--	--	--
..STENELMIS	--	--	--	--
..DIPTERA				
..CHIRONOMIDAE	--	84	11	--
..CARDIOCLADIUS	--	--	9	2
..CONCHAPELOPIA	--	20	55	41
..CRICOTOPUS	--	--	5	2
..EUKIEFFERIELLA	--	--	--	--
..LIMNOCHIRONOMUS	--	--	--	--
..NANOCLADIUS	--	--	--	--
..ORTHOCCLADIUS	--	72	--	--
..PARATANYTARSUS	--	--	--	--
..RHACOTANYTARSUS	--	--	--	--
..TANYTARSUS	--	--	--	--
..THIENEMANNIELLA	--	--	--	--
..UNKN DIAMESINAE	--	--	--	--
..EMPIDIDAE	--	--	--	--
..UNKNOWN GENUS	--	--	--	--
..SIMULIIDAE	--	--	--	--
..SIMULIUM	--	9	3	2
..TIPULIDAE	--	--	--	--
..ANTOCHA	--	163	8	4
..TIPULA	--	--	1	--
..EPHEMEROPTERA				
..BAETIDAE	--	3	38	3
..BAETIS	--	2	--	--
..PSEUDOCLOEON	--	--	--	--
..EPHEMERELLIDAE	--	227	12	26
..EPHEMERELLA	--	--	--	--
..HEMIPTERA				
..CORIXIDAE	--	--	--	--
..UNKNOWN GENUS	--	--	--	--
..VELIIDAE	--	--	--	--
..RHAGOVIELIA	--	--	--	--
..PLECOPTERA				
..TAENIOPTERYGIDAE	--	1	--	2
..TAENIOPTERYX	--	--	--	--
..TRICHOPTERA				
..GLOSSOSOMATIDAE	--	21	36	1
..GLOSSOSOMA	--	--	--	--
..HYDROPSYCHIDAE	--	108	31	47
..CHEUMATOPSYCHE	28	256	138	134
..HYDROPSYCHE	--	--	--	--
..SYMPHITOPSYCHE	--	--	--	--
..HYDROPTILDAE	--	--	--	--
..HYDROPTILA	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--
..CHIMARRA	--	--	--	--
MOLLUSCA (MOLLUSCS)				
..GASTROPODA				
..BASOMMATOPHORA	--	--	--	--
..PHYSIDAE	--	--	--	--
..PHYSA	--	--	--	--
PLATYHELMINTHES (FLATWORMS)				
..TURBELLARIA				
..TRICLADIDA	--	--	--	--
..PLANARIIDAE	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--
..UNKNOWN GENUS	--	--	--	--

	01473167	LITTLE VALLEY CREEK AT HOWELLVILLE, PA.	
DATE	OCT 27 78	NOV 5 79	OCT 31 80
TIME	1300	1000	0910
TOTAL COUNT	408	222	1983
ORGANISM	COUNT	COUNT	COUNT
ANNELIDA			
..OLIGOCHAETA			
..PLESIOPORA			
...NAIDIDAE	--	--	--
...UNKNOWN GENUS	--	--	--
..TUBIFICIDAE	--	--	12
...UNKNOWN GENUS	--	--	--
..UNKNOWN ORDER	--	--	--
...UNKNOWN FAMILY	--	--	--
...UNKNOWN GENUS	1	--	--
ARTHROPODA (ARTHROPODS)			
..ARACHNIDA			
..HYDRACARINA			
...UNKNOWN FAMILY	--	--	--
...UNKNOWN GENUS	--	--	--
..CRUSTACEA			
..AMPHIPODA			
...GAMMARIDAE	2	23	68
...GAMMARUS	--	--	--
..ISOPODA			
...ASELLIDAE	--	--	--
...ASELLUS	--	1	--
...LIRCEUS	--	--	--
..INSECTA			
..COLEOPTERA			
...ELMIDAE	--	1	--
...OPTIOSERVUS	--	1	--
...STENELMIS	--	--	--
..DIPTERA			
...CHIRONOMIDAE	--	--	--
...CARDIOCLADIUS	--	--	--
...CONCHAPELOPIA	--	--	8
...CRICOTOPUS	39	36	--
...EUKIEFFERIELLA	29	1	41
...LIMNOCHIRONOMUS	--	--	2
...NANOCLADIUS	--	--	2
...ORTHOCCLADIUS	39	--	64
...PARATANYTARSUS	--	--	6
...RHEOTANYTARSUS	--	--	7
...TANYTARSUS	--	--	1
...THIENEMANNIELLA	--	--	1
...UNKN DIAMESINAE	--	--	1
..EMPIDIDAE			
...UNKNOWN GENUS	--	--	4
..SIMULIIDAE			
...SIMULIUM	--	--	--
..TIPULIDAE			
...ANTOCHA	13	5	26
...TIPULA	--	--	--
..EPHEMEROPTERA			
...BAETIDAE			
...BAETIS	10	9	--
...PSEUDOCLOFON	--	--	--
...EPHEMERELLIDAE	--	6	675
...EPHEMERELLA	--	--	--
..HEMIPTERA			
...CORIXIDAE	--	--	1
...UNKNOWN GENUS	--	--	--
...VELLIIDAE	--	--	1
...RHAGOVIELIA	--	--	--
..PLECOPTERA			
...TAENIOPTERYGIDAE	--	1	--
...TAENIOPTERYX	--	--	--
..TRICHOPTERA			
...GLOSSOSOMATIDAE	2	2	10
...GLOSSOSOMA	--	--	--
..HYDROPSYCHIDAE			
...CHEUMATOPSYCHE	38	6	76
...HYDROPSYCHE	53	20	242
...SYMPHITOPSYCHE	181	109	724
..HYDROPTILIDAE			
...HYDROPTILA	--	--	1
..PHILOPOTAMIDAE			
...CHIMARRA	1	--	--
MOLLUSCA (MOLLUSCS)			
..GASTROPODA			
..BASOMMATOPHORA			
...PHYSIDAE	--	--	1
...PHYSA	--	--	--
PLATYHELMINTHES (FLATWORMS)			
..TURBELLARIA			
...TRICLADIDA	--	1	--
...PLANARIIDAE	--	--	--
...UNKNOWN FAMILY	--	--	--
...UNKNOWN GENUS	--	--	9

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

	01473168	VALLEY CREEK NR VALLEY FORGE, PA.		
DATE	OCT 12 73	OCT 23 74	NOV 11 75	OCT 29 76
TIME	0000	0000	1030	0945
TOTAL COUNT	25	153	534	849
ORGANISM	COUNT	COUNT	COUNT	COUNT
ANNELIDA				
..HIRUDINEA				
..UNKNOWN ORDER				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	--	--
ARTHROPODA (ARTHROPODS)				
..CRUSTACEA				
..AMPHIPODA				
...GAMMARIDAE	--	3	11	23
...GAMMARUS				
..ISOPODA				
...ASELLIDAE				
...ASELLUS	1	3	3	--
...LIRCEUS	--	--	--	7
..INSECTA				
..COLEOPTERA				
...ELMIDAE				
...OPTIOSERYUS	--	--	--	3
...STENELMIS	--			--
..DIPTERA				
...CHIRONOMIDAE	--	1	--	--
...ABLABESMYIA	--	--	4	--
...BRILLIA	--	--	--	--
...CARDIOCLADIUS	--	--	2	26
...CONCHAELOPIA	--	--	--	--
...CRICOTOPUS	--		10	10
...EUKIEFFERIELLA	--	--	--	3
...MICROTENDIPES	--	--	--	--
...ORTHOCCLADIUS	--	--	--	4
...POLYPEDILUM	--	--	--	--
...PSECTROCLADIUS	--	--	--	--
...RHEOTANYTARSUS	--	--	6	--
...SIMULIIDAE				
...SIMULIUM	--	--	3	--
...TIPULIDAE				
...ANTOCHA	--	3	98	12
..EPHEMEROPTERA				
...BAETIDAE				
...BAETIS	--	--	--	3
...PSEUDOCLOEON	--	--	--	--
...EPHEMERELLIDAE	--	--		
...EPHEMERELLA	--	--	6	4
...HEPTAGENIIDAE	--	--	--	
...STENONEMA	--	--	--	1
..MEGALOPTERA				
...SIALIDAE				
...SIALIS	--	1	--	--
..TRICHOPTERA				
...HYDROPSYCHIDAE				
...CHEUMATOPSYCHE	--	29	113	261
...HYDROPSYCHE	24	103	274	468
...SYMPHITOPSYCHE	--	--	--	--
...HYDROPTILIDAE				
...LEUCOTRICHIA	--	--	2	--
MOLLUSCA (MOLLUSCS)				
..GASTROPODA				
...BASOMMATOPHORA				
...ANCYLIDAE				
...FERRISSIA	--	10	2	21
...LYMNAEIDAE				
...LYMNAEA	--	--	--	1
...PHYSIDAE				
...PHYSA	--	--	--	1
...PLANORBIDAE	--	--	--	1
...MENETUS				
PLATYHELMINTHES (PLATWORMS)				
..TURBELLARIA				
...TRICLADIDA				
...PLANARIIDAE				
...UNKNOWN GENUS	--	--	--	--
...UNKNOWN FAMILY	--	--	--	--
...UNKNOWN GENUS	--	--	--	--

		01473168 VALLEY CREEK NR VALLEY FORGE, PA.			
DATE		OCT 31, 77	OCT 27, 78	NOV 5, 79	OCT 31, 80
TIME		1500	1345	1050	1030
TOTAL COUNT		1003	388	263	1412
ORGANISM		COUNT	COUNT	COUNT	COUNT
ANNELIDA					
..HIRUDINEA					
...UNKNOWN ORDER					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	--	--	--	2	--
ARTHROPODA (ARTHROPODS)					
..CRUSTACEA					
...AMPHIPODA					
...GAMMARIDAE					
...GAMMARUS	18	--	--	9	28
...ISOPODA					
...ASELLIDAE					
...ASELLUS	--	--	--	--	--
...LIRCEUS	9	8	--	2	140
..INSECTA					
...COLEOPTERA					
...ELMIDAE					
...OPTIOSERVUS	10	8	--	--	8
...STENELMIS	1	--	--	--	--
...DIPTERA					
...CHIRONOMIDAE	--	--	--	--	--
...ABLABESMYIA	1	--	--	--	--
...BRILLIA	--	--	--	--	--
...CARDIOCLADIUS	1	--	--	--	--
...CONCHAPELOPIA	--	--	--	--	4
...CRICOTOPUS	21	12	1	--	80
...EUKIEFFERIELLA	--	44	--	--	4
...MICROTENDIPES	--	--	--	--	--
...ORTHOCLADIUS	22	8	7	--	92
...POLYPEDILUM	1	--	--	--	--
...PSECTROCLADIUS	4	--	--	--	--
...RHEOTANYTARSUS	--	--	--	--	4
...SIMULIIDAE					
...SIMULIUM	3	--	--	--	4
...TIPULIDAE					
...ANTOCHA	53	--	--	5	56
..EPHEMEROPTERA					
...BAETIDAE					
...BAETIS	--	--	--	--	60
...PSEUDOCLOEON	1	--	--	--	--
...EPHEMERELLIDAE					
...EPHEMERELLA	--	--	--	--	4
...HEPTAGENIIDAE					
...STENONEMA	1	--	--	--	--
..MEGALOPTERA					
...SIALIDAE					
...SIALIS	--	--	--	--	--
..TRICHOPTERA					
...HYDROPSYCHIDAE					
...CHEUMATOPSYCHE	160	--	--	56	184
...HYDROPSYCHE	672	252	116	--	192
...SYMPHITOPSYCHE	--	56	64	--	536
...HYDROPTILIDAE					
...LEUCOTRICHIA	--	--	--	--	--
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
...BASOMMATOPHORA					
...ANCYLIDAE					
...FERRISSIA	25	--	--	--	--
...LYMNAEIDAE					
...LYMNAEA	--	--	--	--	--
...PHYSIDAE					
...PHYSA	--	--	--	--	--
...PLANORBIDAE					
...MENEIUS	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)					
..TURBELLARIA					
...TRICLADIDA					
...PLANARIIDAE					
...UNKNOWN GENUS	--	--	--	1	--
...UNKNOWN FAMILY	--	--	--	--	--
...UNKNOWN GENUS	--	--	--	--	16

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	01475300 DARBY CREEK AT WATERLOO MILLS NEAR DEVON, PA.					
	MAY 27, 70 0000	OCT 6, 70 0000	MAY 11, 71 0000	OCT 5, 71 0000	OCT 18, 72 0000	OCT 22, 74 0000
TOTAL COUNT	79	46	30	8	155	239
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..PLESIOPORA						
..NAIDIDAE						
..UNKNOWN GENUS	--	--	--	--	--	--
..TUBIFICIDAE	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
..CRUSTACEA						
..AMPHIPODA						
..GAMMARIDAE						
..GAMMARUS						1
..TALITRIDAE						
..HYALLELLA	--	--	--	--	--	--
..INSECTA						
..COLEOPTERA						
..DRYOPIDAE						
..HELICUS	--	--	--	--	--	--
..ELMIDAE						
..DUBIRAPHIA	--	--	--	--	--	--
..OPTIOSERVUS	--	--	--	--	--	--
..OULIMNIUS	--	--	--	--	--	--
..STENELMIS	--	--	--	--	--	--
..PSEPHENIDAE	--	--	--	--	--	--
..PSEPHENUS	--	--	--	--	1	--
..DIPTERA						
..CHIRONOMIDAE	7	--	18	--	18	43
..ABLABESMYIA	--	--	--	--	--	--
..CONCHAPELOPIA	--	--	--	--	--	--
..CORYNONEURA	--	--	--	--	--	--
..CRICOTOPUS	--	--	--	--	--	--
..EUKIEFFERIELLA	--	--	--	--	--	--
..HETEROTRISOCLADIUS	--	--	--	--	--	--
..IMNOCHIRONOMUS	--	--	--	--	--	--
..MICROSECTRA	--	--	--	--	--	--
..MICROTENDIPES	--	--	--	--	--	--
..ORTHOCLADIUS	--	--	--	--	--	--
..POLYPEDILUM	--	--	--	--	--	--
..PSEUDODIAMESA	--	--	--	--	--	--
..RHEOTANYTARSUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	--	--
..EMPIDIDAE						
..HEMERODROMIA	--	--	--	--	--	1
..SIMULIIDAE						
..SIMULIUM	54	--	--	--	3	5
..TIPULIDAE						
..ANTOCHA	--	--	--	--	7	22
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	5	4	--	--	2	--
..EPHEMERELLIDAE						
..EPHEMERELLA	1	--	--	--	--	--
..HEPTAGENIIDAE						
..STENONEMA	--	17	--	1	6	--
..SIPHONURIDAE						
..AMELETUS	1	--	--	--	--	--
..ISONYCHIA	--	--	--	--	--	--
..MEGALOPTERA						
..CORYDALIDAE						
..NIGRONIA	--	--	--	--	--	--
..ODONATA						
..COENAGRIONIDAE						
..UNKNOWN GENUS	--	--	--	--	--	--
..PLECOPTERA						
..CAPNIIDAE						
..PARACAPNIA	--	--	--	--	--	--
..PERLIDAE						
..ACRONEURIA	--	--	--	--	--	--
..TAENIOPTERYGIDAE						
..TAENIOPTERYX	--	--	--	--	--	--
..TRICHOPTERA						
..GLOSSOSOMATIDAE						
..GLOSSOSOMA	--	--	--	--	--	2
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE	--	--	7	4	70	112
..HYDROPSYCHE	9	25	5	3	46	42
..SYMPHITOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE						
..HYDROPTILA	--	--	--	--	--	--
..LEUCOTRICHIA	--	--	--	--	1	3
..OCHROTRICHIA	--	--	--	--	--	1
..PHILOPOTAMIDAE						
..CHIMARIA	2	--	--	--	--	7
..DOLOPHILODES	--	--	--	--	1	--
..WORMALDIA	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..PHYSIDAE						
..PHYSA	--	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE						
..UNKNOWN GENUS	--	--	--	--	--	--
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--

		01475300					DARBY CREEK AT WATERLOO MILLS NEAR DEVON, PA.	
DATE	TIME	NOV 7 75	OCT 28 76	OCT 31 77	OCT 27 78	OCT 30 79	OCT 31 80	
		1430	0845	1130	1145	1300	1300	
TOTAL COUNT		690	473	555	54	362	468	
ORGANISM		COUNT	COUNT	COUNT	COUNT	COUNT	COUNT	
ANNELIDA								
..OLIGOCHAETA								
..PLESIOPORA								
..NAIDIDAE								
..UNKNOWN GENUS		--	--	--	--	1	--	
..TUSIFICIDAE								
..UNKNOWN GENUS		--	1	--	--	--	--	
ARTHROPODA (ARTHROPODS)								
..ARACHNIDA								
..HYDRACARINA								
..UNKNOWN FAMILY								
..UNKNOWN GENUS		1	--	--	--	--	--	
..CRUSTACEA								
..AMPHIPODA								
..GAMMARIDAE								
..GAMMARUS		1	2	--	--	--	--	
..TALITRIDAE								
..HYALLELA		--	--	--	--	--	4	
..INSECTA								
..COLEOPTERA								
..ORTHOPTERA								
..HELICHUS		--	1	4	--	--	--	
..ELMIDAE								
..DUBIRAPHIA		--	--	--	--	--	--	
..OPTIOSERVUS		7	14	17	--	11	12	
..OULIMNIUS		--	1	3	--	3	--	
..STENELMUS		12	34	26	3	21	4	
..PSEPHENIDAE								
..PSEPHENUS		--	1	3	1	6	--	
..DIPTERA								
..CHIRONOMIDAE								
..ABLABESMYIA		5	--	--	--	--	--	
..CONCHAPELOPIA		--	1	--	--	--	--	
..CORYNONEURA		--	1	--	--	--	--	
..CRICOTOPUS		11	15	--	--	87	12	
..EUKIEFFERIELLA		5	--	--	--	--	4	
..HETEROTRISOCLADIUS		11	--	--	--	--	--	
..LIMNOCHIRONOMUS		--	3	--	--	--	--	
..MICROPECTRA		5	--	--	--	--	--	
..MICROTENDIPES		--	--	--	2	--	--	
..ORTHOCLADIUS		22	--	31	--	5	28	
..POLYPEDILUM		--	--	1	--	--	--	
..PSEUDODIAMESA		--	--	--	--	--	--	
..RHEOTANYTARSUS		11	5	18	--	--	32	
..THIENEMANNIELLA		5	1	--	--	--	8	
..EMPIDIDAE								
..HEMERODROMIA		--	--	2	--	2	--	
..SIMULIIDAE								
..SIMULIUM		43	51	8	--	6	4	
..TIPULIDAE								
..ANTOCHA		33	3	8	--	--	4	
..EPHEMEROPTERA								
..BATTIS								
..BATTIS		1	--	--	--	1	--	
..EPHEMERELLIDAE								
..EPHEMERELLA		5	--	5	--	--	--	
..HEPTAGENIIDAE								
..STENONEMA		22	36	40	--	9	44	
..SIPHONURIDAE								
..AMELETUS		--	--	--	--	--	--	
..ISONYCHIA		--	--	--	2	--	4	
..MEGALOPTERA								
..CORYDALIDAE								
..NIGRONIA		--	1	--	--	--	--	
..ODONATA								
..COENAGRIONIDAE								
..UNKNOWN GENUS		--	--	--	--	1	--	
..PLECOPTERA								
..CAPNIDAE								
..PARACAPNIA		--	--	--	--	5	--	
..PERLIDAE								
..ACHONEURIA		--	1	1	--	--	--	
..TAENIOPTERYGIDAE								
..TAENIOPTERYX		--	1	1	--	--	--	
..TRICHOPTERA								
..GLOSSOSOMATIDAE								
..GLOSSOSOMA		5	11	4	--	1	24	
..HYDROPSYCHIDAE								
..CHEUMATOPSYCHE		317	98	132	2	12	88	
..HYDROPSYCHE		149	126	194	31	89	104	
..SYMPHITOPSYCHE		--	--	--	--	23	--	
..HYDROPTILIDAE								
..ALISOTRICHIA		--	--	1	--	--	--	
..HYDROPTILA		--	--	--	--	--	8	
..LEUCOTRICHIA		1	--	1	--	--	--	
..OCHROTRICHIA		--	--	--	--	--	--	
..PHILOPOTAMIDAE								
..CHIMARRA		18	51	50	13	70	76	
..DOLOPHILODES		--	--	--	--	--	--	
..WORMALDIA		--	1	--	--	--	--	
MOLLUSCA (MOLLUSCS)								
..GASTROPODA								
..BASOMMATOPHORA								
..PHYSIDAE								
..PHYSA		--	1	--	--	--	--	
PLATYHELMINTHES (PLATWORMS)								
..TURBELLARIA								
..TRICLADIDA								
..PLANARIIDAE								
..UNKNOWN GENUS		--	--	--	--	7	4	
..UNKNOWN FAMILY								
..UNKNOWN GENUS		--	6	--	--	--	--	

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	01475830 CRUM CREEK NEAR PAOLI, PA.					
	MAY 27 70 0000	OCT 6 70 0000	MAY 11 71 0000	OCT 5 71 0000	OCT 16 72 0000	OCT 5 73 0000
TOTAL COUNT	89	125	31	28	129	132
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS#2	--	--	--	--	--	--
..UNKNOWN GENUS#3	--	--	--	--	--	--
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
..OPTIOSERVUS	--	--	--	--	--	1
..OULIMNIUS	--	--	--	--	--	1
..STENELMIS	--	--	--	--	--	1
..PSEPHENIDAE	--	--	--	--	--	1
..PSEPHENUS	--	--	--	--	--	1
..DIPTERA						
..ATHERICIDAE=RHAGIONIDAE						
..ATHERIX	--	--	--	--	--	--
..CHIRONOMIDAE	44	--	--	--	51	--
..CONCHAPELOPIA	--	--	--	--	--	--
..CORYNONEURA	--	--	--	--	--	--
..CRICOTOPUS	--	--	--	--	--	--
..DIAMESA	--	--	--	--	--	--
..EUKIEFFERIELLA	--	--	--	--	--	--
..ORTHOCCLADIUS	--	--	--	--	--	--
..PARACHIRONOMUS	--	--	--	--	--	--
..POLYPEDILUM	--	--	--	--	--	--
..RHEOTANYTUS	--	--	--	--	--	--
..STEMPELLINA	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	--	--
..EMPIDIDAE	--	--	--	--	5	--
..HEMERODROMIA	--	--	--	--	--	--
..SIMULIIDAE	4	3	8	10	1	--
..TIPULIDAE	--	--	--	--	4	1
..ANTOCHA	--	--	--	--	--	--
..TIPULA	--	--	--	--	--	--
..EPHEMEROPTERA						
..BAETIDAE	5	9	3	--	--	3
..BAETIS	2	--	--	--	--	--
..EPHEMERELLIDAE	2	--	--	--	--	--
..EPHEMERELLA	5	11	2	2	4	--
..HEPTAGENIIDAE	--	--	--	--	--	--
..STENONEMA	12	--	--	--	--	3
..SIPHONURIDAE	1	1	--	--	--	--
..AMELETUS	--	--	--	--	--	--
..ISONYCHIA	--	--	--	--	--	--
..TRICORYTHIDAE	--	--	--	--	1	--
..TRICORYTHODES	--	--	--	--	--	--
..HEMIPTERA						
..VELIIDAE	--	--	--	--	--	1
..RHAGOVIELA	--	--	--	--	--	--
..LEPIDOPTERA						
..UNKNOWN FAMILY	--	--	--	--	--	1
..UNKNOWN GENUS	--	--	--	--	--	--
..PYRALIDIDAE	--	--	--	--	--	--
..PARARGYACTIS	--	--	--	--	--	--
..MEGALOPTERA						
..CORDALIDAE	--	--	--	--	--	--
..NIGRONIA	--	--	--	--	--	--
..ODONATA						
..COENAGRIONIDAE	--	--	--	--	--	--
..ARGIA	--	--	--	--	--	--
..PLECOPTERA						
..PERLIDAE	--	--	--	--	4	--
..(NEO)PHASGANOPHORA	--	--	--	--	--	--
..ACRONEURIA	4	1	--	--	--	--
..ACRONEURIA	--	--	--	--	--	--
..NEOPERLA	--	--	--	--	--	8
..PARAGNETINA	--	--	--	--	--	--
..TAENIOPTERYGIDAE	--	--	--	--	--	--
..TAENIOPTERYX	--	--	--	--	--	--
..TRICHOPTERA						
..GLOSSOSOMATIDAE	--	--	--	--	--	--
..GLOSSOSOMA	--	--	--	--	--	--
..HYDROPSYCHIDAE	--	--	8	9	19	54
..CHEUMATOPSYCHE	12	39	10	7	37	49
..HYDROPSYCHE	--	48	--	--	--	--
..SYMPHITOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE	--	--	--	--	1	--
..HYDROPTILA	--	--	--	--	2	--
..LEUCOTRICHIA	--	--	--	--	--	--
..OCHROTRICHIA	--	--	--	--	--	--
..MOLANNIDAE	--	--	--	--	--	--
..MOLANNA	--	--	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--	--	9
..CHIMARRA	--	--	--	--	--	--
..POLYCENTROPODIDAE	--	--	--	--	--	--
..NYCTIOPHYLAX	--	--	--	--	--	--
..POLYCENTROPUS	--	--	--	--	--	--
..PSYCHOMYIDAE	--	13	--	--	--	--
..PSYCHOMYIA	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE	--	--	--	--	--	--
..FERRISSIA	--	--	--	--	--	--
..LYMNAEIDAE	--	--	--	--	--	--
..LYMNAEA	--	--	--	--	--	--
..PHYSIDAE	--	--	--	--	--	--
..PHYSA	--	--	--	--	--	--
NEMATODA (NEMATODES)						
..UNKNOWN CLASS						
..UNKNOWN ORDER						
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--



01475830 CRUM CREEK NEAR PAOLI, PA.					
DATE	OCT 28 76	OCT 31 77	OCT 27 78	OCT 30 79	OCT 31 80
TIME	0945	0930	1045	1400	1500
TOTAL COUNT	212	221	225	22	46
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA					
..OLIGOCHAETA					
..UNKNOWN ORDER					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	4	--	--	--	--
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS#2	--	1	--	--	--
..UNKNOWN GENUS#3	--	3	--	--	--
..INSECTA					
..COLEOPTERA					
..ELMIDAE					
..OPTIOSERVUS	6	8	--	--	1
..OULMIUS	1	--	--	--	--
..STENELMIS	7	2	13	--	--
..PSEPHENIDAE					
..PSEPHENUS	13	1	5	--	--
..DIPTERA					
..ATHERICIDAE=RHAGIONIDAE					
..ATHERIX	--	1	--	--	--
..CHIRONOMIDAE	--	--	--	--	--
..CONCHAPELOPIA	2	--	--	--	--
..CORYNONEURA	3	--	--	--	--
..CRICOTOPUS	7	42	--	4	2
..DIANESA	1	--	--	--	--
..EUKTEFFERIELLA	3	--	--	--	1
..ORTHOCLADIUS	--	--	6	3	2
..PARACHIRONOMUS	--	1	--	--	--
..POLYPEDILUM	--	--	2	--	--
..RHEOTANYTARSUS	15	14	4	1	--
..STEMPELLINA	1	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	1
..EMPIDIDAE	--	--	--	1	--
..HEMERODROMIA	--	--	--	--	--
..SIMULIIDAE					
..SIMULIUM	5	--	--	1	2
..TIPULIDAE					
..ANTOCHA	2	12	--	--	1
..TIPULA	--	--	--	--	1
..EPHEMEROPTERA					
..BAETIDAE					
..BAETIS	--	--	--	1	--
..EPHEMERELLIDAE					
..EPHEMERELLA	17	17	4	--	--
..HEPTAGENIIDAE					
..HEPTAGENIA	37	15	17	2	2
..SIPHONURIDAE					
..AMELETUS	--	--	--	--	--
..ISONYCHIA	11	7	3	1	3
..TRICORYTHIDAE					
..TRICORYTHODES	--	--	--	--	--
..HEMIPTERA					
..VELIIDAE					
..RHAGOVIELIA	--	--	--	--	--
..LEPIDOPTERA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	--	--	--
..PYRALIDIDAE					
..PARARGYACTIS	3	1	12	--	7
..MEGALOPTERA					
..CORYDALIDAE	--	1	--	--	--
..NIGRONIA					
..ODONATA					
..COENAGRIONIDAE	--	2	--	--	--
..ARGIA	--	--	--	--	--
..PLECOPTERA					
..PERLLIDAE					
..NEOPHASGANOPHORA	--	--	--	--	--
..ACRONEURIA	--	1	--	--	--
..ACRONEURIA	1	--	--	--	--
..NEOPERLA	--	1	--	--	--
..PARAGNETINA	3	3	4	2	1
..TAENIOPTERYGIDAE					
..TAENIOPTERYX	--	--	--	--	3
..TRICHOPTERA					
..GLOSSOSOMATIDAE					
..GLOSSOSOMA	2	1	--	--	--
..HYDROPSYCHIDAE					
..CHEUMATOPSYCHE	15	51	--	--	3
..HYDROPSYCHE	15	26	102	4	15
..SYMPHITOPSYCHE	--	--	22	--	--
..HYDROPTILIDAE					
..HYDROPTILA	--	3	--	--	1
..LEUCOTRICHIA	1	--	--	--	--
..OCHROTRICHIA	3	--	--	--	--
..MOLANNIDAE					
..MOLANNA	--	--	4	--	--
..PHILOPOTAMIDAE					
..CHIMARRA	8	3	13	2	--
..POLYCENTROPIDIDAE					
..NYCTIOPHYLAX	1	--	--	--	--
..POLYCENTROPUS	1	--	--	--	--
..PSYCHOMYIIDAE					
..PSYCHOMYIA	--	--	--	--	--
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
..BASOMMATOPHORA					
..ANCYLIDAE					
..FERRISSIA	24	1	13	--	--
..LYMNAEIDAE					
..LYMNAEA	--	--	1	--	--
..PHYSIDAE					
..PHYSA	--	1	--	--	--
NEMATODA (NEMATODES)					
..UNKNOWN CLASS					
..UNKNOWN ORDER					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	1	--	--	--

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

	01475840 CRUM CREEK AT WHITEHORSE, PA.					
DATE TIME	MAY 27 70 0000	OCT 6 70 0000	MAY 11 71 0000	OCT 5 71 0000	OCT 16 72 0000	OCT 5 73 0000
TOTAL COUNT	152	88	31	45	219	120
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
..INSECTA						
..COLEOPTERA						
..DIPLODIAE						
..HELIIDAE						
..ELMIDAE						
..OPTIOSERVUS						2
..OULIMNIUS						2
..STENELMIS						
..PSEPHENIDAE						1
..PSEPHENUS						1
..COLLEMBOLA						
..ENTOMOBRYIDAE						
..DIPTERA						
..CHIRONOMIDAE	79	--	2	5	111	14
..CARDIOLADIUS						
..CONCHAPELOPIA						
..CORYNONEURA						
..CRICOTOPUS						
..EUKIPEPHELIA						
..ORTHOCADIUS						
..PARATANYTARSUS						
..POLYPEDILUM						
..PSEUDOCADIUS						
..PSEUDODIAMESA						
..RHEOTANYTARSUS						
..TANYTARSUS						
..TRIENEMANNIELLA						
..UNKNOWN GENUS						
..NEOZAVRELIA						
..EMPIDIDAE					1	
..HEMERODROMIA						
..SIMULIIDAE						
..SIMULIUM	4	--		7	--	2
..TIPULIDAE						
..ANTOCHA	2	1	--	--	6	2
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	--	4	--	--	3	1
..CENTROPTILUM	--	2	--	--	--	--
..PSEUDOCLOEON	--	--	--	--	--	--
..CAENIDAE						
..CAENIS	--	--	--	--	--	--
..EPHEMERELLIDAE						
..EPHEMERELLA	9	--	--	--	--	0
..HEPTAGENIIDAE						
..STENONEMA	4	6	1	1	7	10
..SIPHONURIDAE						
..AMELETUS	10	--	--	--	--	1
..ISONYCHIA	--	1	--	--	--	--
..HEMIPTERA						
..VELIIDAE						
..RHAGOVIELIA	--	--	--	--	--	--
..LEPIDOPTERA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
..PYRALIDAE						
..PARARGYCTIS	--	--	--	--	--	3
..MEGALOPTERA						
..SIALIDAE						
..SIALIS	--	--	--	--	--	--
..ODONATA						
..COENAGRIONIDAE						
..ARGIA	--	--	--	--	--	--
..PLECOPTERA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
..PERLIDAE						
..ACRONEURIA	--	1	--	--	--	--
..NEOPERLA	4	--	--	--	--	--
..PARAGNETINA	--	--	--	--	--	--
..TAENIOPTERYGIDAE	--	--	--	--	--	--
..TAENIOPTERYX	--	--	--	--	--	--
..TRICHOPTERA						
..GLOSSOSOMATIDAE						
..GLOSSOSOMA	--	--	--	--	--	1
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE	--	29	4	14	9	19
..HYDROPSYCHE	40	40	18	18	79	47
..SYMPHYTOPSYCHE						
..HYDROPTILIDAE						
..HYDROPTILA	--	--	--	--	--	--
..LEUCOTRICHIA	--	--	--	--	3	4
..OCHROTRICHIA	--	--	--	--	--	--
..LIMNephilidae						
..GOERA	--	--	--	--	--	--
..PHILOPOTAMIDAE						
..CHIMARRA	--	--	--	--	--	9
..PSYCHOMYIIDAE						
..PSYCHOMYIA	--	4	6	2	--	--
MOLLUSCA (MOLLUSCS)						
..BIVALVIA						
..NUCULOIDEA						
..SPHAERIIDAE						
..SPHAERIUM	--	--	--	--	--	--
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA	--	--	--	--	--	--
NEMATODA (NEMATODES)						
..UNKNOWN CLASS						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE						
..UNKNOWN GENUS	--	--	--	--	--	--
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--

01475840 CRUM CREEK AT WHITEHORSE, PA.						
DATE	OCT 22, 74	OCT 28, 78	OCT 31, 77	OCT 27, 78	OCT 30, 78	NOV 10, 80
TIME	0000	1030	1030	1000	1430	1215
TOTAL COUNT	87	383	835	112	131	417
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	3	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	5	3	--	--	--
..INSECTA						
..COLEOPTERA						
..DRYOPTERA						
..HELICUS	--	--	1	--	--	--
..ELMIDAE						
..OPTIOSERVUS	2	7	7	2	3	16
..OULIMNUS	1	3	3	1	4	--
..STENELMIS	3	3	3	--	4	--
..PSEPHENIDAE						
..PSEPHENUS	1	7	2	1	2	13
..COLEMBOLA						
..ENTOMOBRYIDAE	--	--	--	--	--	--
..DIPTERA						
..CHIRONOMIDAE						
..CARDIOLADIUS	28	--	--	--	--	4
..CONCHAPELOPIA		3	--	--	--	--
..CORYNONEURA	--	--	--	--	--	--
..CRICOTOPUS	--	44	--	--	2	84
..EUKIEFFERIELLA	--	--	--	2	1	--
..ORTHOCADIUS	--	6	111	20	31	4
..PARATANTARSUS	--	--	--	35	--	--
..POLYPTILUM	--	--	35	--	--	--
..PSECTROCLADIUS	--	--	2	--	--	--
..PSEUDODIAMESA	--	--	5	--	--	--
..RHEOTANTARSUS	--	12	47	8	--	--
..TANTARSUS	--	--	--	1	--	--
..THIENEMANNIELLA	--	10	17	--	--	--
..UNKNOWN GENUS	--	--	1	--	--	--
..NEOZAVRELIA	--	--	--	4	--	--
..EMBIIDAE	--	--	--	--	--	--
..HEMERODROMIA	2	1	1	--	--	--
..SIMULIDAE						
..SIMULIUM	1	2	1	--	--	--
..TIPULIDAE						
..ANTOCHA	7	15	28	3	--	72
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	1	--	--	--	--	--
..CENTROPTILUM	--	--	1	1	--	--
..PSEUDOCLOEON	--	--	1	--	--	--
..CAENIDAE						
..CAENIS	--	--	1	--	--	--
..EPHEMERELLIDAE						
..EPHEMERELLA	4	6	51	2	--	8
..HEPTAGENIIDAE						
..STENONEMA	8	7	33	4	13	16
..SIPHONURIDAE						
..AMELETUS	--	--	--	--	--	--
..ISONYCHIA	--	10	12	4	5	--
..HEMIPTERA						
..VELIIDAE						
..RHAGOVIELIA	--	--	--	1	3	--
..LEPIDOPTERA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	1	--	--	--	--	--
..PYRALIDAE						
..PARARGYACTIS	6	19	47	--	--	24
..MEGALOPTERA						
..SIALIDAE						
..SIALIS	--	--	1	--	--	--
..ODONATA						
..COENAGRIONIDAE						
..ARGIA	--	--	--	1	--	--
..PLECOPTERA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	1	--	--	--	--
..PERLIDAE						
..ACRONEURIA	--	--	--	--	--	--
..NEOPERLA						
..PARAENETINA	1	--	2	--	--	4
..TAENIOPTERYGIDAE						
..TAENIOPTERYX	--	1	--	--	--	--
..TRICHOPTERA						
..GLOSSOSOMATIDAE						
..GLOSSOSOMA	--	11	--	--	--	4
..HYDROPSYCHIDAE	--	54	184	8	13	18
..CHEUMATOPSYCHE	--	100	207	18	23	72
..HYDROPSYCHE	--	--	--	11	27	--
..SYMPHITOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE	--	--	7	2	1	4
..HYDROPTILUM	--	5	7	1	--	52
..LEUCOTRICHIA	--	4	--	--	--	--
..OCHHOTRICHIA	--	--	--	--	--	--
..LIMNIPHILIDAE	--	1	--	--	--	--
..GOERA	--	--	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--	--	--
..CHIMARRA	--	19	14	6	3	16
..PSYCHOMYIDAE	--	--	--	--	--	--
..PSYCHOMTIA	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..BIVALVIA						
..NUCULOIDEA						
..SPHAERIIDAE	--	1	--	--	--	--
..SPHAERIUM						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE	4	1	--	1	--	4
..FERRISSIA						
NEMATODA (NEMATODES)						
..UNKNOWN CLASS						
..UNKNOWN ORDER						
..UNKNOWN FAMILY	--	--	1	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
PLATYHELMINTHES (PLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE						
..UNKNOWN GENUS	--	--	--	--	--	4
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	2	--	1	--	--

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	01476430 RIDLEY CREEK AT GOSHENVILLE, PA.					
	MAY 28, 70 0000	OCT 6, 70 0000	JUN 8, 71 0000	OCT 5, 71 0000	OCT 16, 72 0000	OCT 5, 73 0000
TOTAL COUNT	126	116	33	15	158	246
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..PLESIOPORA						
..NAIDIAE						
..UNKNOWN GENUS	--	--	--	--	--	--
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--		--	--	1
CRUSTACEA						
..CALANOIDA						
..DIAPYLOMIDAE						
..DIAPYLOMUS	--	--	--	--	--	--
INSECTA						
..COLEOPTERA						
..ELMIDAE						
..DUBIRAPHIA	--	--	--	--	--	--
..OPTIOSERVUS	--	--	--	--	--	--
..STENELMIS	--	--	--	--	--	--
..DIPTERA						
..CHIRONOMIDAE	43	2	--	--	22	1
..BRILLIA	--	--	--	--	--	--
..CARDIOCLADIUS	--	--	--	--	--	--
..CRICOTOPUS	--	--	--	--	--	--
..EUDIEFFERIELLA	--	--	--	--	--	--
..MICROTENDIPES	--	--	--	--	--	--
..NANOCLADIUS	--	--	--	--	--	--
..ORTHOCLADIUS	--	--	--	--	--	--
..PARATANYTARSUS	--	--	--	--	--	--
..PROCLADIUS	--	--	--	--	--	--
..RHEOTANYTARSUS	--	--	--	--	--	--
..TANYTARSUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	--	--
..EMPIDIDAE						
..HEMERODROMIA	--	--	--	--	--	--
..SIMULIIDAE						
..SIMULIUM	16	8	10	--	8	3
..TABANIDAE	--	--	--	--	--	--
..TABANUS	--	--	--	--	--	--
..TIPULIDAE						
..ANTOCHA	2	--	--	--	--	2
EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	1	--	--	--	1	8
..PSEUDOCLOEON	--	--	--	--	1	--
..EPHEMERELLIDAE	--	--	8	--	1	--
..EPHEMERELLA	--	--	--	--	--	--
..HEPTAGENIIDAE	--	--	6	--	26	5
..STENONEMA	--	--	--	--	--	--
..SIPHONURIDAE	--	--	--	--	--	--
..AMELETUS	7	--	--	--	--	7
..ISONYCHIA	--	--	--	--	8	--
HEMIPTERA						
..GERRIDAE						
..UNKNOWN GENUS	--	--	--	--	--	--
MEGALOPTERA						
..CORDYLIDAE	--	--	--	--	--	1
..CORDYLUS	--	--	--	--	--	--
..SIALIDAE	--	--	--	--	--	--
..SIALIS	--	--	--	--	--	--
PLECOPTERA						
..PERLIDAE						
..NEOPHAGANOPHORA	--	--	--	--	--	--
..NEOPERLA	--	--	--	--	--	--
..TAENIOPTERYGIDAE	--	--	--	--	3	--
..TAENIOPTERYX	--	--	--	--	--	--
TRICHOPTERA						
..GLOSSOSOMATIDAE	--	--	--	--	4	--
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE	13	30	5	7	7	33
..HYDROPSYCHE	44	77	4	8	84	171
..MACRONEMA	--	--	--	--	--	10
..SYMPHITOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE						
..HYDROPTILA	--	--	--	--	1	--
..EUCOTRICHIA	--	--	--	--	--	1
..OCHROTRICHIA	--	--	--	--	--	--
..STACTOBIELLA	--	--	--	--	--	--
..LEPTOCERIDAE	--	--	--	--	--	--
..MYSTACIDES	--	--	--	--	--	--
..MOLANNIDAE						
..MOLANNA	--	1	--	--	--	--
..PHILOPOTAMIDAE						
..CHIMARRA	--	--	--	--	5	3
..DOLOPHILODES	--	--	--	--	7	--
..POLYCENTROPODIDAE						
..POLYCENTROPUS	--	--	--	--	--	--
..PSYCHOMYIIDAE						
..PSYCHOMYIA	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..BIVALVIA						
..NUCULOIDAE						
..SPHAEIIDAE						
..MUSCULIUM	--	--	--	--	--	--
GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA	--	--	--	--	--	--
..LYMNAEIDAE	--	--	--	--	--	--
..LYMNAEA	--	--	--	--	--	--
..PHYSIDAE	--	--	--	--	--	--
..PHYSA	--	--	--	--	--	--
..PLANORBIDAE	--	--	--	--	--	--
..GYRAULUS	--	--	--	--	--	--
NEMATODA (NEMATODES)						
..UNKNOWN CLASS						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
PLATYHELMINTHES (PLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--

DATE TIME	01476430 RIDLEY CREEK AT GOSHENVILLE, PA.					
	OCT 31 75 0900	OCT 20 76 1000	OCT 19 77 1530	OCT 24 78 1330	OCT 31 79 1030	NOV 17 80 1330
TOTAL COUNT	788	420	349	59	84	202
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..PLESIOPORA						
..NAIDIDAE						
..UNKNOWN GENUS	--	1	--	--	--	--
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	1	--	--	--	--	4
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	3	--	2	--	--
..CRUSTACEA						
..CALANOIDA						
..DIAPYLOMIDAE						
..DIAPYLOMUS	1	--	--	--	--	--
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
..DUBIRAPHIA				1	--	--
..OPTIOSERVUS	25	27	12	--	2	1
..STENELMIS	--	--	5	--	--	--
..DIPTERA						
..CHIRONOMIDAE	--	--	--	--	--	--
..BRILLIA	--	--	--	--	--	1
..CARDIOLADIUS	38	--	--	--	--	--
..CRICOTOPUS	55	--	18	5	--	--
..EUKIEFFERIELLA	--	--	--	--	--	--
..MICROCENDIPES	38	22	--	2	--	--
..NANOCCLADIUS	--	--	--	--	--	1
..ORTHOCLADIUS	73	--	--	--	8	85
..PARATANTYARSUS	--	--	1	--	--	4
..PROCLIDIUS	--	--	--	--	--	--
..RHEOTANTYARSUS	55	16	13	4	1	13
..TANTYARSUS	--	--	--	--	--	1
..THIENEMANNIELLA	36	--	1	--	--	--
..EMPIDIDAE						
..HEMERODROMIA	4	--	--	--	--	--
..SIMULIIDAE						
..SIMULIUM	50	5	--	1	5	9
..TABANIDAE						
..TABANUS	--	--	1	--	--	--
..TIPULIDAE						
..ANTOCIA	26	35	20	5	4	3
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	--	--	--	--	--	--
..PSEUDOCLOEON	--	--	--	--	--	--
..EPHEMERELLIDAE						
..EPHEMERELLA	12	23	--	1	1	1
..HEPTAGENIIDAE						
..STENONEMA	19	10	28	7	14	7
..STIPHONURIDAE	--	--	--	--	--	--
..AMELETUS	--	--	--	--	--	--
..ISONYCHIA	2	4	15	1	1	--
..HEMIPTERA						
..GERRIDAE						
..UNKNOWN GENUS	--	--	2	--	--	--
..MEGALOPTERA						
..CORYDALIDAE						
..CORYDALUS	--	--	2	--	--	--
..SIALIDAE	--	1	--	1	--	--
..PLECOPTERA						
..PERLIDAE						
..NEOPHASGANOPHORA	--	--	--	--	--	1
..NEOPTERA	--	--	3	--	--	--
..TAENIOPTERYGIDAE						
..TAENIOPTERYX	13	10	--	2	3	--
..TRICHOPTERA						
..GLOSSOSOMATIDAE						
..GLOSSOSOMA	5	3	--	--	--	--
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE	189	83	49	3	2	30
..HYDROPSYCHE	143	131	165	1	13	1
..MACRONEMA	--	--	--	--	--	--
..SYMPHYTOPSYCHE	--	--	--	16	26	13
..HYDROPTILIDAE						
..HYDROPTILA	--	--	--	--	--	1
..LEUCOTRICHIA	3	--	--	--	--	--
..OCHROTRICHIA	--	42	--	--	--	--
..SPACTOBELLA	2	--	--	--	--	--
..LEPTOCERIDAE						
..MYSTACIDES	1	--	4	--	--	--
..MOLANNIDAE						
..MOLANNA	--	--	--	--	--	--
..PHILOPOTAMIDAE						
..CHIMARRA	17	--	4	--	1	4
..DOLOPHILODES						
..POLYCENTROPIDAE						
..POLYCENTROPUS	--	--	--	1	--	1
..PSYCHOMYIDAE						
..PSYCHOMYIA	--	--	--	--	--	1
MOLLUSCA (MOLLUSCS)						
..BIVALVIA						
..NUCULOIDEA						
..SPHAERIIDAE					1	--
..MUSCULUM	--	--	--	--	--	--
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA	2	--	--	--	--	11
..LYMNAEIDAE						
..LYMNAEA	--	--	--	1	--	--
..PHYSIDAE	--	1	8	1	--	6
..PHYSA						
..PLANORBIDAE	--	--	--	2	--	--
..GYRAULUS						
NEMATODA (NEMATODES)						
..UNKNOWN CLASS						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	2	--	--	--	2	--
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..UNKNOWN FAMILY		3	--	--	--	3
..UNKNOWN GENUS	--					

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	01476435 RIDLEY CR AT DUTTON MILL NR WEST CHESTER, PA.					
	MAY 28 70 0000	OCT 6 70 0000	JUN 8 71 0000	OCT 5 71 0000	OCT 16 72 0000	OCT 5 73 0000
TOTAL COUNT	37	172	13	32	189	63
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS						
INSECTA						
..COLEOPTERA						
..ELMIDAE						
..OPTIOSERVUS						
..STENELMIS					1	
..PSEPHENIDAE						
..PSEPHENUS						
..DIPTERA						
..CHIRONOMIDAE	8				53	1
..CARDIOCLADIUS						
..CONCHAPELOPIA						
..CRICOTOPUS						
..DIAMESA						
..EUKIEFFERIELLA						
..ORTHOCLADIUS						
..PECTROCLADIUS						
..RHOTANTARSUS						
..TANYTARSUS						
..THIENEMANNIELLA					2	
..EMPIDIDAE						
..SIMULIDAE	7			15	3	8
..SIMULIUM						
..TIPULIDAE						
..ANTOCHA						1
..TIPULA						
..EPHEMEROPTERA						
..BAETIDAE						6
..BAETIS		3				
..CENTROPTILUM		1				
..CAENIDAE						
..CAENIS						
..EPHEMERELLIDAE						
..EPHEMERELLA	8		4	2	2	
..SERRATELLA						
..HEPTAGENIIDAE						
..STENONEMA	1	16	1	1	58	
..SIPHONURIDAE						
..ISONCHIA					19	7
..SIPHONURUS		1				
..LEPIDOPTERA						
..PYRALIDIDAE						
..PARARGYACTIS						
..MEGALOPTERA						
..CORYDALIDAE						
..CORYDALUS		1				
..NIGRONIA						
..ODONATA						
..AGRIIDAE						
..AGRION						
..COENAGRIONIDAE						
..ARGIA		1				
..PLECOPTERA						
..PERLIDAE						
..ACRONEURIA						
..PARANETIA						
..TAENIOPTERYGIDAE						
..TAENIOPTERYX						
..TRICHOPTERA						
..BRACHYCENTRIDAE						
..BRACHYCENTRUS						
..GLOSSOSOMATIDAE						2
..GLOSSOSOMA						
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE		65	3	4	25	3
..HYDROPSYCHE	13	61	5	10	15	35
..MACRONEMA					5	
..POTAMYIA						
..SYMPHITOPSYCHE						
..HYDROPTILIDAE						
..HYDROPTILA						
..LEUCOTRICHIA						
..LYMNEPHYLIDAE					1	
..PHILOPOTAMIDAE						
..CHIMARRA					5	
..POLYCENTROPIDIDAE						
..NEURECLIPSIS						
..POLYCENTROPUS						
..PSYCHOMYIIDAE						
..PSYCHOMYIA		23				
MOLLUSCA (MOLLUSCS)						
..BIVALVIA						
..NUCULOIDEA						
..SPHAERIUM						
..SCHIZODONTA						
..UNIONIDAE						
..UNKNOWN GENUS						
GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA						
..LYMNAEIDAE						
..LYMNAEA						
..PHYSIDAE						
..PHYSA						
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE						
..UNKNOWN FAMILY						
..UNKNOWN GENUS						

01476435 RIDLEY CR AT DUTTON MILL NR WEST CHESTER, PA.						
DATE	OCT 22, 74	OCT 20, 76	OCT 27, 77	OCT 24, 78	OCT 30, 79	NOV 17, 80
TIME	0000	0915	1100	1345	1530	1430
TOTAL COUNT	165	470	105	76	236	1144
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	7	--	--	--	8
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
..OPTIOSERVUS	--	4	--	--	3	4
..STENELMIS	--	18	2	9	9	--
..PSEPHENIDAE						
..PSEPHENUS	--	--	1	--	1	--
..DIPTERA						
..CHIRONOMIDAE	--	--	--	--	--	--
..CARDIACLODIUS	--	--	1	--	--	--
..CONCHAPELOPIA	--	4	--	2	--	8
..CRICOTOPUS	--	9	7	--	7	--
..DIAMESA	--	--	--	--	--	52
..EUKTEFFERIELLA	--	--	--	--	--	12
..ORTHOCLADIUS	--	--	--	--	53	188
..PSECTROCLADIUS	--	--	--	--	1	--
..RHEOTANYTARSUS	--	3	--	--	2	56
..TANYTARSUS	--	--	--	1	--	--
..THIENEMANNIELLA	--	5	--	--	--	--
..EMPIDIDAE						
..SIMULIIDAE						
..SIMULIUM	1	22	2	--	4	44
..TIPULIDAE						
..TIPULA	2	2	--	--	3	44
..ANTOCHA	--	--	--	--	--	--
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	--	8	2	3	--	--
..CENTROPTILUM	--	--	--	--	--	--
..CAENIDAE						
..CAENIS	--	--	5	--	--	--
..EPHEMERELLIDAE						
..EPHEMERELLA	--	38	--	--	--	--
..SERRATELLA	--	--	--	--	--	64
..HEPTAGENIIDAE						
..STENONEMA	--	37	2	--	2	28
..SIPHONURIDAE						
..ISONYCHIA	--	14	--	--	4	4
..SIPHONURUS	--	--	--	--	--	--
..LEPIDOPTERA						
..PYRALIDIDAE						
..PARARGYCTIS	--	--	--	4	1	12
..MEGALOPTERA						
..CORYDALIDAE						
..CORYDALUS	--	3	--	3	2	8
..NIGRONIA	--	1	--	--	--	--
..ODONATA						
..AGRIDAE						
..AGRION	--	--	1	--	--	--
..COENAGRIONIDAE	--	--	--	--	--	--
..ARGIA						
..PLECOPTERA						
..PERLIDAE						
..ACRONEURIA	--	1	--	7	4	--
..PARAGNETINA	--	--	1	--	1	--
..TAENIOPTERYGIDAE						
..TAENIOPTERYX	--	2	--	--	--	--
..TRICHOPTERA						
..BRACHYCENTRIDAE						
..BRACHYCENTRUS	--	--	--	--	--	4
..GLOSSOSOMATIDAE						
..GLOSSOSOMA	--	--	--	--	--	--
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE	61	118	13	14	23	88
..HYDROPSYCHE	89	80	23	16	113	8
..MACRONEMA	7	13	3	--	--	--
..POTAMYIA	--	--	33	--	--	--
..SYMPHITOPSYCHE	--	--	--	8	--	324
..HYDROPTILIDAE						
..HYDROPTILA	--	--	--	--	--	4
..LEUCOTRICHIA	--	15	--	--	--	32
..LIMNephilidae	--	--	--	--	--	--
..PHILOPOTAMIDAE						
..CHIMARRA	3	20	1	1	3	64
..POLYCENTROPIDIDAE						
..NEURECLIPSIS	--	--	1	--	--	32
..POLYCENTROPUS	--	3	--	--	--	--
..PSYCHOMYIIDAE						
..PSYCHOMYIA	--	--	--	--	--	28
MOLLUSCA (MOLLUSCS)						
..BIVALVIA						
..NUCULOIDEA						
..SPHAERIIDEA	--	28	2	--	--	--
..SPHAERIUM						
..SCHIZODONTA						
..UNIONIDAE						
..UNKNOWN GENUS	--	--	--	7	--	--
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA	--	6	5	1	--	12
..LYMNAEIDAE						
..LYMNAEA	1	1	--	--	--	--
..PHYSIDAE	--	--	--	--	--	--
..PHYSA	--	1	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE	1	--	--	--	--	--
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	4	--	--	--	16

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	01476790 EAST BRANCH CHESTER CREEK AT GREEN HILL, PA.					
	MAY 22 70 0000	OCT 26 70 0000	MAY 17 71 0000	OCT 11 71 0000	OCT 10 72 0000	OCT 5 73 0000
TOTAL COUNT	225	59	74	43	520	144
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..PLESIOPODA						
...TUBIFICIDAE						
...UNKNOWN GENUS	--	--	--	--	--	--
...UNKNOWN ORDER						
...UNKNOWN FAMILY						
...UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA	--	--	--	--	--	--
..CRUSTACEA						
..ISOPODA						
...ASELLIDAE						
...ASELLUS	--	--	--	--	--	--
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
...OPTIOSERVUS	--	--	--	--	6	0
...OULIMNIUS	--	--	--	--	8	2
...STENELMIS	--	--	--	--		
...PSEPHENIDAE	--	--	--	--	2	--
..ECTOPRIA						
..DIPTERA						
...ATHERICIDAE=RHAGIONIDAE	--	--	--	--	--	13
...ATHERIX	--	--	5	12	26	5
..CHIRONOMIDAE	222	--	--	--	--	--
...CONCHAPELOPIA	--	--	--	--	--	--
...CORYNONEURA	--	--	--	--	--	--
...CRICOTOPUS	--	--	--	--	--	--
...MICROTENDIPES	--	--	--	--	--	--
...ORTHOCLEADUS	--	--	--	--	--	--
...PARAMETRIOCNENUS	--	--	--	--	--	--
...PARATANYTARSUS	--	--	--	--	--	--
...PHAENOPSECTRA	--	--	--	--	--	--
...POLYPEDILUM	--	--	--	--	--	--
...RHEOTANYTARSUS	--	--	--	--	--	--
...THIENEMANNIELLA	--	--	--	--	--	--
..UNKN CHIRONOMINAE	--	--	--	--	--	--
...UNKNOWN GENUS	--	--	--	--	2	--
..EMPIDIDAE						
..SIMULIIDAE	--	--	3	1	2	0
..SIMULIUM						
..TIPULIDAE						
...ANTOCHA	1	--	1	--	89	0
..TIPULA	--	--	--	--	--	1
..EPHEMEROPTERA						
..BAETIIDAE						
...BAETIS	--	1	1	--	10	8
...PSEUDOCLOEON	--	--	--	--	4	--
...UNKNOWN GENUS	--	--	--	--	--	--
..EPHEMERELLIDAE						
...EPHEMERELLA	1	7	25	3	16	1
...EURYLOPHELLA	--	--	--	--	--	--
...SERRATELLA	--	--	--	--	--	--
..HEPTAGENIIDAE						
...STENONEMA	1	15	14	7	25	14
..SIPHONURIDAE						
...ISONYCHIA	--	--	--	--	1	0
..HEMIPTERA						
...MESOVELIIDAE	--	--	--	--	--	--
...MESOVELIA	--	--	--	--	--	--
..MEGALOPTERA						
...CORYDALIDAE	--	--	--	--	--	--
..NIGRONIA						
..ODONATA						
..AGRIIDAE						
..AGRION	--	--	--	--	--	--
..PLECOPTERA						
..PERLODIDAE	--	--	--	--	1	--
..ISOPERLA						
..TRICHOPTERA						
...GLOSSOSOMATIDAE	--	21	8	--	17	28
...GLOSSOSOMA	--	--	--	--	--	--
...HYDROPSYCHIDAE	--	--	7	3	24	6
...CHEUMATOPSYCHE	--	--	10	15	276	63
...HYDROPSYCHE	--	15	--	--	--	--
...POTAMYIA	--	--	--	--	--	--
...SYMPHITOPSYCHE	--	--	--	--	--	--
..LIMNIPHILIDAE						
...APATANIA	--	--	--	--	--	--
...HYDATOPHYLAX	--	--	--	--	--	--
...LIMNIPHILUS	--	--	--	--	--	--
..PHILOPOTANIDAE						
...CHIMARRA	--	--	--	--	11	3
...DOLOPHILODES	--	--	--	--	--	--
..POLYCENTROPODIDAE						
...POLYCENTROPUS	--	--	--	--	--	--
...PSYCHOMYIIDAE	--	--	--	2	--	--
...PSYCHOMYIA	--	--	--	--	--	--
..RHYACOPHILIDAE						
...RHYACOPHILA	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..PHYSIDAE						
...PHYSA	--	--	--	--	--	--



01476790 EAST BRANCH CHESTER CREEK AT GREEN HILL, PA.						
DATE TIME	OCT 23 74 0000	OCT 21 76 1545	OCT 18 77 1130	OCT 24 78 1020	OCT 31 79 1130	NOV 3 80 0845
TOTAL COUNT	13	703	162	175	179	247
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..PLESIOPORA						
...TUBIFICIDAE	--	4	--	--	--	4
...UNKNOWN GENUS	--	--	2	--	1	--
...UNKNOWN ORDER						
...UNKNOWN FAMILY						
...UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA	1	--	--	--	--	--
..CRUSTACEA						
..ISOPODA						
...ASELLIDAE	3	1	--	3	5	4
...ASELLUS						
..INSECTA						
..COLEOPTERA						
...ELMIDAE						
...OPTIOSERVUS	--	18	--	1	6	--
...OULIMNIUS	--	5	--	--	--	4
...STENELMIS	--	--	8	--	--	--
...PSEPHENIDAE	--	--	--	--	--	--
...ECTOPRIA	--	--	--	--	--	--
..DIPTERA						
...ATHERICIDAE=RHAGIONIDAE	--	--	--	--	--	--
...ATHERIX	5	--	--	--	--	--
...CHIRONOMIDAE	--	3	--	--	--	4
...CONCHAPELOPIA	--	--	--	--	--	16
...CORYNONEURA	--	90	4	1	--	4
...CRICOTOPUS	--	--	--	--	--	8
...MICROTENDIPES	--	--	--	--	--	--
...ORTHOCLEADUS	--	--	--	1	--	--
...PARAMELETICCNEMUS	--	--	--	--	--	12
...PARATANYTARSUS	--	--	--	--	--	16
...PHAENOPSECTRA	--	--	--	--	--	16
...POLYPEDILUM	--	--	--	2	--	16
...RHEOTANYTARSUS	--	75	1	--	--	--
...THIENEMANNIELLA	--	12	--	--	--	--
...UNKN CHIRONOMINAE	--	--	--	--	1	--
...UNKNOWN GENUS	--	--	1	--	--	--
..EMPIDIDAE	--	--	--	--	--	--
..SIMULIIDAE	--	2	--	1	--	--
..SIMULIUM						
..TIPULIDAE						
...ANTOCHA	4	15	9	4	10	8
...TIPULA	--	3	--	--	--	1
..EPHEMEROPTERA						
...BAETIDAE						
...BAETIS	--	22	1	--	--	--
...PSEUDOCLOEON	--	--	--	--	--	--
...UNKNOWN GENUS	--	--	--	2	--	--
..EPHEMERELLIDAE						
...EPHEMERELLA	--	14	--	--	--	--
...EURYLOPHELLA	--	--	--	--	--	8
...SERRATELLA	--	--	--	--	--	16
...HEPTAGENIIDAE						
...STENONEMA	--	54	23	9	2	--
..SIPHONURIDAE						
...ISONYCHIA	--	--	--	--	--	--
..HEMIPTERA						
...MESOVELIIDAE	--	--	2	--	--	--
...MESOVELIA	--	--	--	--	--	--
..MEGALOPTERA						
...CORYDALIDAE	--	1	--	--	1	--
...NIGRONIA						
..ODONATA						
...AGRIIDAE	--	--	--	--	--	1
...AGRION						
..PLECOPTERA						
...PERLODIDAE	--	--	--	--	--	--
...ISOPHELA						
..TRICHOPTERA						
...GLOSSOSOMATIDAE	--	33	31	28	17	56
...GLOSSOSOMA						
..HYDROPSYCHIDAE						
...CHEUMATOPSYCHE	--	15	1	11	12	4
...HYDROPSYCHE	--	322	70	108	124	44
...POTAMIA	--	--	9	--	--	4
...SYMPHITOPSYCHE	--	--	--	--	--	--
..LIMNephilidae						
...APATANIA	--	--	--	--	--	8
...HYDATOPHYLAX	--	--	--	--	--	1
...LIMNephilus	--	1	--	--	--	--
..PHILOPOTAMIDAE						
...CHIMARRA	--	1	--	--	--	--
...DOLOPHIODES	--	7	--	2	--	--
..POLYCENTROPIDAE						
...POLYCENTROPUS	--	1	--	--	--	--
..PSYCHOMYIIDAE						
...PSYCHOMYIA	--	--	--	--	--	--
...RHYACOPHILIDAE	--	--	--	--	--	--
...RHYACOPHILA	--	3	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
...BASOMMATOPHORA						
...PHYSIDAE						
...PHYSA	--	1	--	--	--	8

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	01476830 EAST BRANCH CHESTER CREEK AT MILLTOWN, PA.					
	MAY 16 70 0000	OCT 26 70 0000	MAY 17 71 0000	OCT 11 71 0000	OCT 10 72 0000	OCT 5 73 0000
TOTAL COUNT	147	83	97	24	299	234
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..PLESIOPORA						
..NAIDIDAE						
..UNKNOWN GENUS						
..TUBIFICIDAE						
..UNKNOWN GENUS						
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS						
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
..ANCYRONYX						
..A. VARIEGATA						
..DUBIRAPHIA						
..MACRONYCHUS						
..OPTIOSERVUS						
..OULIMNIUS						
..STENELMIS					4	
..HYDROPHILIDAE						
..BEROSUS						
..DIPTERA						
..ATHERICIDAE=RHAGIONIDAE						
..ATHERIX						
..CHIRONOMIDAE	118		38	2	15	
..CARDIOCLADIUS						
..CONCHAPELOPIA						
..CRICOTOPUS						
..ENDOCHIRONOMUS						
..EUKIEFFERIELLA						
..MICROTENDIPES						
..ORTHOCLADIUS						
..PARAMETRIOCNEMUS						
..POLYPEDILUM						
..PROCLADIUS						
..PSECTROCLADIUS						
..RHEOTANYTARSUS						
..TANYTARSUS						
..THIENEMANNIELLA						
..EMPIDIDAE					1	
..HEMERODROMIA						
..SIMULIIDAE				3	7	
..SIMULIUM						
..TIPULIDAE						
..ANTOCHA	10				3	1
..TIPULA						1
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS			3		7	
..CAENIDAE						
..CAENIS						
..EPHEMERELLIDAE						
..EPHEMERELLA	1	21	12			
..HEPTAGENIIDAE						
..STENOEMA		23	8		20	1
..HEMPTERA						
..GERRIDAE						
..UNKNOWN GENUS						
..MEGALOPTERA						
..CORDYLIDAE						
..NIGRONIA						
..ODONATA						
..AGRIIDAE						
..AGRION						
..COENAGRIONIDAE						
..AMPHIAGRION						
..UNKNOWN GENUS						
..PLECOPTERA						
..TAENIOPTERYGIDAE						
..TAENIOPTERYX						
..TRICHOPTERA						
..GLOSSOSOMATIDAE						
..GLOSSOSOMA		16	4			
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE				6	70	72
..HYDROPSYCHE	18	23	28	13	164	159
..POTAMYIA						
..SYMPHITOPSYCHE						
..HYDROPTILIDAE					8	
..HYDROPTILA						
..PHILOPOTAMIDAE						
..CHIMARRA						
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA						
..PHYSIDAE						
..PHYSA						
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE						
..UNKNOWN GENUS						

01476830 EAST BRANCH CHESTER CREEK AT MILLTOWN, PA.						
DATE	OCT 29, 74	OCT 21, 76	OCT 18, 77	OCT 24, 78	OCT 31, 79	NOV 3, 80
TIME	0000	1445	1245	1130	0830	1030
TOTAL COUNT	73	244	338	86	490	102
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..PLESIOPOREA						
..NAIDIDAE						
...UNKNOWN GENUS	--	--	--	--	1	--
..TUBIFICIDAE						
...UNKNOWN GENUS	--	2	--	--	--	--
ARTHROPODA (ARTHROPODS)						
ARACHNIDA						
..HYDRACARINA						
...UNKNOWN FAMILY						
...UNKNOWN GENUS	--	--	--	--	2	--
INSECTA						
..COLEOPTERA						
...ELMIDAE						
...ANCYRONYX	--	1	--	--	--	--
...A. VARIEGATA	--	--	--	--	2	--
...DUBIRAPHIA	--	1	1	--	1	--
...MACRONYCHUS	--	1	--	--	--	--
...OPTIOSERVUS	--	2	--	--	4	--
...OULIMNIUS	--	1	--	--	--	--
...STENELMIS	--	1	4	--	3	4
..HYDROPHILIDAE						
..BEROSUS	--	1	--	--	--	--
DIPTERA						
..ATHERICIDAE=RHAGIONIDAE						
...ATHERIX	--	--	8	--	--	--
..CHIRONOMIDAE	7	1	--	--	--	--
...CARDIOCLADIUS	--	--	--	--	--	--
...CONCHAPELOPIA	--	--	--	--	1	--
...CRICOTOPUS	--	64	122	1	166	41
...ENDOCHIRONOMUS	--	--	4	--	--	--
...EUKIEFFERIELLA	--	--	--	--	5	--
...MICROTENDIPES	--	33	23	1	9	--
...ORTHOCLADIUS	--	--	--	3	2	--
...PARAMETRICNEMUS	--	--	--	--	--	--
...POLYPEDILUM	--	--	--	--	6	--
...PROCLADIUS	--	--	4	--	--	--
...PSECTROCLADIUS	--	18	--	--	--	--
...RHEOTANYTARSUS	--	7	--	--	1	--
...TANYTARSUS	--	--	26	--	--	--
...THIENEMANNIELLA	--	3	--	--	--	--
..EMPIDIDAE	--	--	--	--	--	--
..HEMERODROMIA	--	2	--	--	--	--
..SIMULIIDAE	--	--	1	--	9	7
...SIMULIUM	--	2	--	--	--	--
..TIPULIDAE	--	4	7	--	6	--
...ANTOCHAE	--	--	--	--	--	--
..TIPULA						
..EPHEMEROPTERA						
...BAETIDAE	--	2	--	--	1	1
...BAETIS						
...CAENIDAE						
...CAENIS	1	1	--	--	--	--
...EPHEMERELLIDAE	--	--	--	--	2	--
...EPHEMERELLA						
...HEPTAGENIDAE	--	--	--	--	--	--
...STENONEMA	3	3	1	6	17	8
..HEMIPTERA						
...GERRIDAE	--	--	1	--	--	--
...UNKNOWN GENUS	--	--	--	--	--	--
..MEGALOPTERA						
...CORYDALIDAE	--	--	--	1	--	--
...NIGRONIA						
..ODONATA						
...AGRIIDAE	1	--	--	--	--	--
...AGRION						
..COENAGRIONIDAE	--	2	--	--	--	--
...AMPHIAGRION	--	--	--	--	1	--
...UNKNOWN GENUS						
..PLECOPTERA						
...TAENIOPTERYGIDAE	--	2	--	--	--	--
...TAENIOPTERYX						
..TRICHOPTERA						
...GLOSSOSOMATIDAE	--	--	--	--	--	--
...GLOSSOSOMA						
...HYDROPSYCHIDAE	--	--	--	--	--	--
...CHEUMATOPSYCHE	--	13	12	56	121	31
...HYDROPSYCHE	60	77	116	9	83	6
...POTAMYIA	--	--	5	--	--	--
...SYMPHITOPSYCHE	--	--	--	6	43	--
..HYDROPTILIDAE	--	--	--	--	--	--
...HYDROPTILA	--	--	--	--	1	4
...PHILOPOTAMIDAE	--	--	--	--	--	--
...CHIMARRA	--	--	--	1	--	--
MOLLUSCA (MOLLUSCS)						
GASTROPODA						
..BASOMMATOPHORA						
...ANCYLIDAE	--	--	1	2	1	--
...FERRISSIA						
..PHYSIDAE						
...PHYSA	1	--	1	--	--	--
PLATYHELMINTHES (FLATWORMS)						
TURBELLARIA						
..TRICLADIDA						
...PLANARIIDAE	--	--	1	--	2	--
...UNKNOWN GENUS						

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	01476835 EAST BRANCH CHESTER CR AT WESTTOWN SCHOOL, PA.					
	MAY 9 70 0000	OCT 26 70 0000	MAY 17 71 0000	OCT 11 71 0000	OCT 10 72 0000	OCT 29 74 0000
TOTAL COUNT	365	55	86	156	901	1333
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..HIRUDINEA						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	12
..OLIGOCHAETA						
..PLESIPOPOA						
..TUBIFICIDAE						
..UNKNOWN GENUS	--	--	--	--	--	--
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
..CRUSTACEA						
..AMPHIPODA						
..TALITRIDAE						
..HYALLELA						
..H. AZTECA	--	--	--	--	--	--
..INSECTA						
..COLEOPTERA						
..DYTISCIDAE						
..LACCOPHILUS						
..ELMIDAE						
..ANCYRONYX						1
..DUBIRAPHIA						1
..OPTIOSERVUS						--
..STENELMIS						--
..PSEPHENIDAE						--
..PSEPHENUS						--
..DIPTERA						
..CERATOPOGONIDAE=HELEIDAE					1	--
..UNKNOWN GENUS					--	--
..CHIRONOMIDAE	206	--	22	14	25	462
..CHIRONOMUS						
..CONCHAPELOPIA						
..CORYNOMURA						
..CRICOTOPUS						
..CRYPTOCHIRONOMUS						
..EUKIEFFERIELLA						
..LIMNOCHIRONOMUS						
..MICROPSERIA						
..MICROTENDIPES						
..ORTHOCLADIUS						
..PARAMETRIOCNEMUS						
..PARATANYTARSUS						
..POLYPEDILUM						
..RHOTANYTARSUS						
..TANYTARSUS						
..THIENEMANNIELLA						
..EMPIDIDAE					4	--
..HEMERODROMIA					--	--
..UNKNOWN GENUS					--	--
..SIMULIIDAE						
..SIMULIUM	103	--	45	5	57	210
..TIPULIDAE						
..ANTOCHA	44	--	--	--	1	--
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	--	--	--	--	6	1
..PSEUDOCLOEON	--	--	--	--	3	--
..UNKNOWN GENUS	--	--	--	--	--	--
..CAENIDAE						
..CAENIS						
..EPHEMERELLIDAE						
..EPHEMERELLA	--	--	2	--	--	--
..HEPTAGENIIDAE						
..STENONEMA	--	--	--	7	21	2
..LEPIDOPTERA						
..PYRALIDIDAE						
..PARARGACTIS	--	--	--	--	--	--
..MEGALOPTERA						
..CORYDALIDAE						
..NIGRONIA	--	--	--	--	1	--
..SIALIDAE	--	--	--	--	--	--
..SIALIS						
..ODONATA						
..COENAGRIONIDAE						
..NEHALENNIA	--	--	--	--	--	--
..TRICHOPTERA						
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE						
..HYDROPSYCHE	12	55	9	111	494	370
..SYMPHITOPSYCHE	--	--	--	19	288	218
..HYDROPTILIDAE						
..HYDROPTILA	--	--	--	--	--	--
..LEUCOTRICHIA	--	--	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--	--	--
..CHIMARRA	--	--	1	--	--	--
MOLLUSCA (MOLLUSCS)						
..BIVALVIA						
..NUCULOIDEA						
..SPHAERIIDAE						
..SPHAERIUM	--	--	--	--	--	2
..UNKNOWN GENUS	--	--	--	--	--	--
..GASTROPODA						
..BASOMMATOPHORA						
..ARCYLIDAE						
..FERRISSIA	--	--	--	--	--	2
..PHYSIDAE	--	--	--	--	--	1
..PHYSA	--	--	--	--	--	--
..PLANORBIDAE	--	--	--	--	--	--
..GYRAULUS						
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE	--	--	--	--	--	51
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--

01478835 EAST BRANCH CHESTER CR AT WESTTOWN SCHOOL, PA.						
DATE	OCT 28, 78	OCT 18, 77	OCT 24, 78	OCT 31, 79	NOV 3, 80	NOV 12, 80
TIME	1130	1400	1515	1315	1230	1245
TOTAL COUNT	860	1094	504	49	2721	1770
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..HIRUDINEA						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	2	--	--	--	--
..OLIGOCHAETA	--	--	--	--	--	--
..PLESIOPORA						
..TUBIFICIDAE						
..UNKNOWN GENUS	--	--	--	--	--	56
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	2	--	--	--	8	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	3	--	--	8	--
..CRUSTACEA						
..AMPHIPODA						
..TALITRIDAE						
..HYALLELLA						
..H. AZTECA	--	1	--	--	--	--
..INSECTA						
..COLEOPTERA						
..DYTISCIDAE						
..LACCOPHILUS	1	--	--	--	--	--
..ELMIDAE	--	--	--	--	--	4
..ANCYRONYX	--	--	--	--	--	4
..DUBIRAPHIA	2	2	--	--	--	4
..OPTIOSERVUS	1	1	--	--	4	12
..STENELMIS	2	2	--	1	1	24
..PSEPHENIDAE						
..PSEPHENUS	3	--	--	--	--	--
..DIPTERA						
..CERATOPOGONIDAE=HELEIDAE	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	8
..CHIRONOMIDAE						
..CHIRONOMUS						4
..CONCHAELOPIA	1	4	--	--	24	20
..CORYNONEURA	--	--	--	--	--	4
..CRICOTOPUS	34	25	48	--	8	25
..CRYPTOCHIRONOMUS	--	8	--	--	--	8
..EUKIEFFERIELLA	--	--	--	--	--	--
..LIMNOCHIRONOMUS	--	--	--	--	84	40
..MICROPSPECTRA	--	52	--	--	--	--
..MICROTENDIPES	--	2	8	--	60	116
..ORTHOCLADIUS	--	--	--	11	248	152
..PARAMETRIOCNEMUS	3	--	--	--	--	4
..PARATANYTARSUS	--	--	--	--	28	32
..POLYPEIDULUM	--	20	--	--	--	--
..RHEOTANYTARSUS	2	--	--	1	20	8
..TANYTARSUS	--	--	--	--	--	4
..THIENEMANNIELLA	8	1	--	--	--	12
..EMPIDIDAE	1	1	--	--	--	--
..HEMERODROMIA	--	1	18	--	--	--
..UNKNOWN GENUS	--	--	--	--	12	20
..SIMULIIDAE						
..SIMULIUM	68	78	176	--	940	384
..TIPULIDAE						
..ANTOCHA	11	4	--	4	40	16
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	4	--	--	--	4	4
..PSEUDOCLOEON	--	--	--	--	--	--
..UNKNOWN GENUS	--	2	--	--	--	--
..CAENIDAE						
..CAENIS	--	--	--	--	8	20
..EPHEMERELLIDAE						
..EPHEMERELLA	1	--	--	--	12	--
..HEPTAGENIIDAE						
..STENONEMA	7	93	24	5	76	16
..LEPIDOPTERA						
..PYRALIIDAE						
..PARARGYACTIS	--	--	--	3	--	--
..MEGALOPTERA						
..CORYDALIDAE						
..NIGRONIA	--	--	--	--	--	--
..STALIDAE	--	--	--	--	--	1
..STALIS						
..ODONATA						
..COENAGRIONIDAE	--	1	--	--	--	--
..NEHALENNIA						
..TRICHOPTERA						
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE	394	508	--	--	316	240
..HYDROPSYCHE	308	268	216	15	148	96
..SYMPHITOPSYCHE	--	--	16	--	500	276
..HYDROPTILIDAE						
..HYDROPTIL	--	2	--	--	68	--
..LEUCOTRICHIA	--	6	--	1	32	40
..PHILOPOTAMIDAE						8
..CHIMARRA	--	--	--	1	--	--
MOLLUSCA (MOLLUSCS)						
..BIVALVIA						
..NUCULOIDEA						
..SPHAERIIDAE						
..SPHAERIUM	2	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	3	--	--
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA	2	7	--	4	--	--
..PHYSIDAE						
..PHYSA	--	--	--	--	4	--
..PLANORBIDAE						
..GYRAULUS	--	1	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE	--	--	--	--	--	--
..UNKNOWN FAMILY						
..UNKNOWN GENUS	3	--	--	--	68	112

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

	01478120		EAST BRANCH WHITE CLAY CREEK AT AVONDALE, PA.		
DATE	OCT 27 70	MAY 18 71	OCT 12 71	OCT 17 72	OCT 8 73
TIME	0000	0000	0000	0000	0000
TOTAL COUNT	76	140	26	202	293
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA					
..OLIGOCHAETA					
..PLESIOPODA					
..NAIDIDAE					
...UNKNOWN GENUS	--	--	--	--	--
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
..UNKNOWN FAMILY					
...UNKNOWN GENUS	--	--	--	--	--
..INSECTA					
..COLEOPTERA					
..DIPLOPODA					
..HEMICHUS					
..ELMIDAE					
..ANCYRONYX					
..A. VARIEGATA					
..MACRONYCHUS					
..M. GLABRATUS					
..OPTIOSERVUS					5
..OULIMNIUS					
..STENELMIS					
..HYDROPHILIDAE					
..BEROSUS					
..PSEPHENIDAE					
..PSEPHENUS					
..DIPTERA					
..ATHERICIDAE=RHAGIONIDAE					
..ATHERIX					
..A. VARIEGATA					
..CHIRONOMIDAE		27		81	38
..CARDIOCLADIUS					
..CONCHAPELOPIA					
..CRICOTULUS					
..EUKIEFFERIELLA					
..LIMNOCHIRONOMUS					
..MICROTENDIPES					
..NANOCLADIUS					
..ORTHOCLADIUS					
..PARAMETRICNEMUS					
..POLYPEDILUM					
..RHEOTANYTARSUS					
..THIENEMANNIELLA					
..EMPIDIDAE				6	
..HEMERODROMIA					
..UNKNOWN GENUS					
..SIMULIIDAE					
..SIMULIUM					
..TIPULIDAE		97	7	2	16
..ANTOCHA				20	41
..EPHEMEROPTERA					
..BAETIDAE					
..BAETIS	4	14	3	1	6
..PSEUDOCLOEON					
..UNKNOWN GENUS					
..EPHEMERELLIDAE					
..EPHEMERELLA	7		4		
..HEPTAGENIIDAE					
..STENONEMA	3		3	5	
..SIPHONURIDAE					
..ISONYCHIA					
..TRICORYTHIDAE					
..TRICORYTHODES					
..HEMIPTERA					
..VELIIDAE					
..RHAGOVIELA					1
..ODONATA					
..AESHNIDAE					
..BOYERIA				1	
..AGRIIDAE					
..AGRION					
..COENAGRIONIDAE					
..UNKNOWN GENUS					
..PLECOPTERA					
..TAENIOPTERYGIDAE					
..TAENIOPTERYX					
..TRICHOPTERA					
..HYDROPSYCHIDAE			7	44	93
..CHEUMATOPSYCHE			2	40	87
..HYDROPSYCHE	62				
..SYMPHITOPSYCHE					
..HYDROPTILIDAE				2	
..HYDROPTILA					3
..LEUCOTRICHIA					
..OCHROTRICHIA					
..PHILOPOTAMIDAE					
..CHIMARRA					
..UNKNOWN FAMILY		2			
..UNKNOWN GENUS					
MOLLUSCA (MOLLUSCS)					
..BIVALVIA					
..NUCULOIDEA					
..SPHAERIIDAE					
..UNKNOWN GENUS					
..GASTROPODA					
..BASOMMATOPHORA					
..ANCYLIDAE					
..FERRISSIA					
NEMATODA (NEMATODES)					
..UNKNOWN CLASS					
..UNKNOWN ORDER					
..UNKNOWN FAMILY					
..UNKNOWN GENUS					
PLATYHELMINTHES (PLATWORMS)					
..TURBELLARIA					
..TRICLADIDA					
..PLANARIIDAE					3
..UNKNOWN GENUS					
..UNKNOWN FAMILY					
..UNKNOWN GENUS					
..UNKNOWN ORDER					
..UNKNOWN FAMILY					
..UNKNOWN GENUS					

01478120 EAST BRANCH WHITE CLAY CREEK AT AVONDALE, PA.					
DATE	OCT. 29, 78	NOV. 1, 77	OCT. 25, 78	NOV. 6, 79	NOV. 20, 80
TIME	1445	1330	1230	1330	1500
TOTAL COUNT	820	935	191	855	1188
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA					
..OLIGOCHAETA					
..PLESIOPORA					
...NAIDIDAE					
...UNKNOWN GENUS	--	--	--	21	--
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	3	2	--	4	12
..INSECTA					
...COLEOPTERA					
...DRYOPTIDAE					
...HELIIDAE	--	1	--	--	--
...ELMIDAE	--	--	--	--	--
...ANCYRONYX	--	--	--	6	4
...A.VARIEGATA	--	--	--	--	--
...MACRONYCHUS	--	--	--	1	--
...M.GLABRATUS	--	--	--	47	8
...OPTIOSERVUS	81	12	6	28	--
...OULIMNIUS	6	15	2	10	--
...STENELMIS	7	2	--	--	--
...HYDROPHILIDAE	--	--	--	1	--
...BEROSUS	--	--	--	--	--
...PSEPHENIDAE	--	--	--	2	--
...PSEPHENUS	1	--	--	--	--
..DIPTERA					
...ATHERICIDAE=RHAGIONIDAE					
...ATHERIX	--	1	--	--	--
...A.VARIEGATA	--	--	--	1	--
...CHIRONOMIDAE	--	--	--	--	--
...CARDIOCLADIUS	4	1	--	9	--
...CONCHAPELOPIA	--	--	--	--	--
...CRICOTOPUS	78	102	--	83	--
...EUKIEFERIELLA	--	--	4	3	--
...LIMNOCHIRONOMUS	--	--	--	--	12
...MICROTENDIPES	--	4	--	--	--
...NANOCLADIUS	--	--	--	--	8
...ORTHOCLADIUS	12	--	5	--	92
...PARAMETRICNEMUS	--	--	--	4	--
...POLYPEDILUM	--	--	1	1	--
...RHEOTANYTARSUS	9	210	--	15	4
...THIENEMANNIELLA	10	1	--	--	--
...EMPIDIDAE	--	--	--	--	--
...HEMERODROMIA	23	18	--	4	--
...UNKNOWN GENUS	--	--	2	--	--
..SIMULIIDAE					
...SIMULIUM	83	41	1	13	32
..TIPULIDAE					
...ANTOCHA	35	74	6	135	216
..EPHEMEROPTERA					
...BAETIDAE					
...BAETIS	--	--	--	1	--
...PSEUDOCLOEON	1	3	--	8	8
...UNKNOWN GENUS	--	1	--	--	--
...EPHEMERELLIDAE	--	--	--	--	--
...EPHEMERELLA	--	--	--	--	--
...HEPTAGENIIDAE	--	--	--	--	--
...STENONEMA	3	2	4	11	28
...STIPHONURIDAE	--	--	--	--	--
...ISONYCHIA	--	--	2	3	--
...TRICORYTHIDAE	--	--	--	3	--
...TRICORYTHODES	--	--	--	--	--
..HEMiptera					
...VELIIDAE	--	--	--	--	--
...RHAGOVIELIA	--	--	--	--	--
..ODONATA					
...AESHNIDAE	--	--	--	--	--
...BOYERIA	--	--	--	--	--
...AGRIIDAE	--	--	--	--	--
...AGRION	--	1	--	--	--
...COENAGRIONIDAE	--	--	--	--	--
...UNKNOWN GENUS	--	--	--	--	4
..PLECOPTERA					
...TAENIOPTERYGIDAE					
...TAENIOPTERYX	3	5	--	7	4
..TRICHOPTERA					
...HYDROPSYCHIDAE					
...CHEUMATOPSYCHE	87	144	20	47	48
...HYDROPSYCHE	229	248	32	171	36
...SYMPHYTOPSYCHE	--	--	96	103	144
...HYDROPTILIDAE	--	--	--	--	--
...HYDROPTILA	--	21	--	--	4
...LEUCOTRICHIA	79	19	8	34	372
...OCHROTRICHIA	1	--	--	--	--
...PHILOPOTAMIDAE	--	--	--	--	--
...CHIMABRA	--	--	--	1	--
...UNKNOWN FAMILY	--	--	--	--	--
...UNKNOWN GENUS	--	--	--	--	--
MOLLUSCA (MOLLUSCS)					
..BIVALVIA					
...NUCULOIDEA					
...SPHAERIIDAE					
...UNKNOWN GENUS	--	--	--	--	4
..GASTROPODA					
...BASOMMATOPHORA					
...ANCYLIDAE					
...FERRISSIA	1	3	2	--	--
NEMATODA (NEMATODES)					
..UNKNOWN CLASS					
...UNKNOWN ORDER					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	--	3	--	--	--
PLATYHELMINTHES (PLATWORMS)					
..TURBELLARIA					
...TRICLADIDA					
...PLANARIIDAE	--	--	--	--	--
...UNKNOWN GENUS	--	--	--	82	--
...UNKNOWN FAMILY	--	--	--	--	--
...UNKNOWN GENUS	64	--	--	--	144
...UNKNOWN ORDER					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	--	1	--	--	--

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	01478190 EAST BRANCH WHITE CLAY CREEK AT WICKERTON, PA.					
	JUN 2 70 0000	OCT 27 70 0000	MAY 18 71 0000	OCT 12 71 0000	OCT 17 72 0000	OCT 8 73 0000
TOTAL COUNT	86	61	116	13	677	290
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA	--	--	--	--	--	--
..UNKNOWN ORDER	--	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA	--	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..CRUSTACEA						
..ISOPODA						
..ASELLIDAE	--	--	--	--	--	--
..ASELLUS	--	--	--	--	--	--
..LIRCEUS	--	--	--	--	--	--
..INSECTA						
..COLEOPTERA						
..DRYOPIDAE	--	--	--	--	--	--
..HELICHUS	--	--	--	--	--	--
..ELMIDAE	--	--	--	--	--	--
..OPTIOSERVUS	--	--	--	--	1	2
..OULIMNIUS	--	--	--	--	--	--
..STENELMIS	--	--	--	--	--	1
..UNKNOWN GENUS	--	--	--	--	--	--
..DIPTERA						
..ATHERICIDAE=RHAGIONIDAE	--	--	--	--	--	1
..ATHERIX	--	--	--	--	--	--
..CHIRONOMIDAE	30	1	56	--	186	60
..BLABESMYIA	--	--	--	--	--	--
..CARDIOCLADIUS	--	--	--	--	--	--
..CONCHAPELOPIA	--	--	--	--	--	--
..CRICOTOPUS	--	--	--	--	--	--
..DIAMESA	--	--	--	--	--	--
..EUKIEFFERIELLA	--	--	--	--	--	--
..GOELDICHIRONOMUS	--	--	--	--	--	--
..LIMNOCHIRONOMUS	--	--	--	--	--	--
..MICROPSECTRA	--	--	--	--	--	--
..MICROTENDIPES	--	--	--	--	--	--
..NANOCLADIUS	--	--	--	--	--	--
..ORTHOCLADIUS	--	--	--	--	--	--
..PARAMETRIOCNEMUS	--	--	--	--	--	--
..PARATANYTARSUS	--	--	--	--	--	--
..RHEOTANYTARSUS	--	--	--	--	--	--
..TANYTARSUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	--	--
..EMPIDIDAE	--	--	--	--	1	--
..HEMERODROMIA	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..SIMULIIDAE						
..SIMULIUM	40	--	30	2	2	225
..TIPULIDAE	--	--	--	--	--	--
..ANTOCHA	--	--	--	--	14	--
..HELIUS	--	--	--	--	1	1
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	8	4	6	--	6	--
..PSEUDOCLOEON	--	--	--	--	11	--
..EPHEMERELLIDAE	--	--	--	--	--	--
..EPHEMERELLA	--	5	3	--	--	--
..HEPTAGENIIDAE	--	--	--	--	--	--
..STENONEMA	--	1	1	--	30	--
..SIPHONURIDAE	--	--	--	--	--	--
..ISONYCHIA	--	--	--	--	7	--
..MEGALOPTERA						
..CORYDALIDAE						
..CORYDALUS	--	--	--	--	--	--
..NIGRONIA	--	--	--	--	--	--
..PLECOPTERA						
..PERLIDAE						
..ACRONEURIA	--	1	--	--	--	--
..TRICHOPTERA						
..BRACHYCENTRIDAE	--	--	--	--	--	--
..MICRASEMA	--	--	--	--	--	--
..HYDROPSYCHIDAE	--	--	--	--	17	--
..CHEUMATOPSYCHE	--	--	7	8	136	--
..DIPLECTRONA	--	--	--	--	--	--
..HYDROPSYCHE	8	49	13	3	260	--
..SYMPHITOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE	--	--	--	--	--	--
..HYDROPTILA	--	--	--	--	4	--
..LEUCOTRICHIA	--	--	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--	--	--
..CHIMARRA	--	--	--	--	1	--
..DOLOPHILODES	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA	--	--	--	--	--	--
..ANCYLIDAE	--	--	--	--	--	--
..FERRISSIA	--	--	--	--	--	--
..PHYSIDAE	--	--	--	--	--	--
..PHYSA	--	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TUBELLARIA						
..TRICLADIDA						
..PLANARIIDAE	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..UNKNOWN ORDER	--	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--



01478190 EAST BRANCH WHITE CLAY CREEK AT WICKERTON, PA.					
DATE	OCT 30, 74	NOV 09, 76	NOV 15, 77	NOV 06, 79	NOV 20, 80
TIME	0000	0930	1500	1130	1230
TOTAL COUNT	156	174	283	84	1376
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA					
..OLIGOCHAETA	4	--	--	--	--
..UNKNOWN ORDER	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	852
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
..UNKNOWN FAMILY	--	--	1	--	24
..UNKNOWN GENUS	--	--	--	--	--
..CRUSTACEA					
..ISOPODA					
..ASELLIDAE	--	--	--	--	4
..ASELLUS	--	--	--	1	--
..LIRCEUS	--	--	--	--	--
..INSECTA					
..COLEOPTERA					
..DRYOPIDAE	--	--	--	1	--
..HELIUS	--	--	--	--	--
..ELMIDAE	--	--	--	--	--
..OPTIOSERVUS	4	1	--	3	4
..OULIMNIUS	--	1	--	--	--
..STENELMIS	--	--	--	--	--
..UNKNOWN GENUS	--	--	1	--	--
..DIPTERA					
..ATHERICIDAE=RHAGIONIDAE					
..ATHERIX	--	--	--	--	--
..CHIRONOMIDAE	--	--	--	--	--
..ABLABESMYIA	--	--	--	1	--
..CARDIOCLADIUS	--	--	--	--	8
..CONCHAELOPIA	--	--	--	1	--
..CRICOTOPUS	--	40	5	13	32
..DIANESA	--	--	--	--	8
..EUKIEFFERIELLA	--	--	--	--	4
..GOELDICHIRONOMUS	--	--	--	1	--
..LIMNOCHIRONOMUS	--	--	4	--	56
..MICROSECTRA	--	1	--	--	--
..MICROTENTIPES	--	--	--	1	--
..NANOCLADIUS	--	--	--	--	4
..ORTHOCLADIUS	--	11	--	--	52
..PARAMETRIOCNEMUS	--	--	--	--	4
..PARATANYTARSUS	--	--	--	--	68
..RHOTANYTARSUS	--	--	--	--	27
..TANYTARSUS	--	17	40	29	32
..THIENEMANNIELLA	--	3	--	2	--
..EMPIDIDAE	--	--	--	--	--
..HEMERODROMIA	--	--	72	10	--
..UNKNOWN GENUS	--	--	--	--	68
..SIMULIIDAE					
..SIMULIUM	--	18	20	2	44
..TIPULIDAE					
..ANTOCHA	--	8	--	5	--
..HELIUS	--	--	--	--	--
..EPHEMEROPTERA	2	--	--	--	--
..BAETIDAE					
..BAETIS	--	--	--	1	--
..PSEUDOCLOEON	--	--	--	--	--
..EPHEMERELLIDAE	--	--	--	--	--
..EPHEMERELLA	--	--	--	--	--
..HEPTAGENIIDAE	--	--	--	--	--
..STENONEMA	--	--	--	2	--
..SIPHONURIDAE					
..ISONYCHIA	--	--	--	--	--
..MEGALOPTERA					
..CORYDALIDAE					
..CORYDALUS	--	--	2	--	--
..NIGRONIA	--	1	1	--	--
..PLECOPTERA					
..PERLIDAE					
..ACRONEURIA	--	--	--	--	--
..TRICHOPTERA					
..BRACHYCENTRIDAE					
..MICRASEMA	--	1	--	--	--
..HYDROPSYCHIDAE	--	--	--	--	--
..CHEUMATOPSYCHE	58	8	102	2	12
..DIPLECTRONA	--	--	--	1	--
..HYDROPSYCHE	83	61	22	3	--
..SYMPHITOPSYCHE	--	--	--	--	4
..HYDROPTILIDAE					
..HYDROPTILA	--	--	--	--	4
..LEUCOTRICHIA	--	1	1	--	--
..PHILOPOTAMIDAE					
..CHIMARBA	--	--	--	--	4
..DOLOPHILODES	--	--	--	--	--
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
..BASOMMATOPHORA					
..ANCYLIDAE					
..FERRISSIA	--	1	2	--	12
..PHYSIDAE					
..PHYSA	--	--	--	--	1
PLATYHELMINTHES (FLATWORMS)					
..TURBELLARIA					
..TRICLADIDA					
..PLANARIIDAE	5	--	--	--	--
..UNKNOWN GENUS	--	--	--	4	--
..UNKNOWN FAMILY	--	--	--	--	--
..UNKNOWN GENUS	--	1	--	--	48
..UNKNOWN ORDER					
..UNKNOWN FAMILY	--	--	10	--	--
..UNKNOWN GENUS					

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	01478220 W BR WHITE CLAY CR NR CHESTERVILLE, PA.					
	JUN 2,70 0000	OCT 27,70 0000	MAY 24,71 0000	OCT 17,72 0000	OCT 8,73 0000	NOV 6,75 1330
TOTAL COUNT	19	42	19	367	259	669
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA	--	--	--	--	--	--
..PLESIOPORA	--	--	--	--	--	--
..UNKNOWN ORDER	--	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA	--	--	--	--	--	1
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..INSECTA						
..COLEOPTERA						
..ELMIDAE	--	--	--	2	--	9
..OPTIOSERVUS	--	--	--	--	--	--
..STENELMIS	--	--	--	--	--	--
..DIPTERA						
..CERATOPOGONIDAE=HELEIDAE	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..CHIRONOMIDAE	11	--	--	65	--	7
..ABLABESMYIA	--	--	--	--	--	58
..CARDIOCLADIUS	--	--	--	--	--	15
..CONCHAPELOPIA	--	--	--	--	--	--
..CRICOTOPIUS	--	--	--	--	--	15
..EUKLEPTERIELLA	--	--	--	--	--	15
..LIMNOCHIRONOMUS	--	--	--	--	--	29
..METRIOCNEMUS	--	--	--	--	--	36
..MICROTENDIPES	--	--	--	--	--	7
..ORTHOCCLADIUS	--	--	--	--	--	--
..POLYPEDILUM	--	--	--	--	--	9
..PSEUDODIAMESA	--	--	--	--	--	--
..RHEOTANYTARSUS	--	--	--	--	--	--
..TANYTARSUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	4	--	--
..EMPIDIDAE	--	--	--	--	--	9
..HEMERODROMIA	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..SIMULIIDAE	--	--	10	2	--	5
..SIMULIUM	--	--	--	--	--	--
..TIPULIDAE	--	--	--	10	2	20
..ANTOCHA	--	--	--	--	--	--
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	1	2	5	1	--	6
..PSEUDOCLOSON	--	--	--	6	--	--
..EPHEMERELLIDAE	--	--	--	--	--	2
..EPHEMERELLA	1	1	4	1	--	6
..HEPTAGENIIDAE	--	8	--	20	4	2
..STENONEMA	--	--	--	--	--	--
..SIPHONURIDAE	--	--	--	52	17	2
..ISONYCHIA	--	--	--	--	--	--
..MEGALOPTERA	--	--	--	--	--	1
..CORYDALIDAE	--	--	--	--	1	--
..CORYDALUS	--	--	--	--	--	--
..PLECOPTERA						
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..CAPNIIDAE	--	--	--	--	--	--
..UNKN GENUS	--	--	--	--	--	--
..PERLODIDAE	--	--	--	1	--	--
..ISOPERLA	--	--	--	--	--	--
..TAENIOPTERYGIDAE	--	--	--	--	--	--
..TAENIOPTERYX	--	--	--	--	--	--
..TRICHOPTERA						
..GLOSSOSOMATIDAE	--	--	--	1	--	--
..GLOSSOSOMA	--	--	--	--	--	--
..HYDROPSYCHIDAE	--	--	--	55	64	188
..CHEUMATOPSYCHE	--	--	--	145	168	251
..HYDROPSYCHE	6	31	--	--	--	--
..MACRONEMA	--	--	--	--	--	--
..PARAPSYCHE	--	--	--	--	--	--
..SYMPHYTOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE	--	--	--	--	--	--
..HYDROPTILA	--	--	--	--	3	2
..LEUCOTRICHIA	--	--	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--	--	--
..CHIMARRA	--	--	--	2	--	--
..DOLOPHILODES	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE	--	--	--	--	--	--
..FERRISSIA	--	--	--	--	--	--
..LYMNAEIDAE	--	--	--	--	--	--
..LYMNAEA	--	--	--	--	--	--
..PHYSIDAE	--	--	--	--	--	--
..PHYSA	--	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--

		01478220 W BR WHITE CLAY CR NR CHESTERTVILLE, PA.				
DATE	TIME	NOV 1 76 1030	NOV 1 77 1530	OCT 26 78 0945	NOV 6 79 1030	NOV 20 80 1345
TOTAL COUNT		391	823	205	80	908
ORGANISM		COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..PLESIOPORA		--	--	--	--	8
..UNKNOWN ORDER		--	--	--	--	--
..UNKNOWN FAMILY		--	--	--	--	--
..UNKNOWN GENUS		2	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY		--	--	--	--	--
..UNKNOWN GENUS		1	--	--	--	36
..INSECTA						
..COLEOPTERA						
..ELMIDAE		--	--	--	--	--
..OPTIOSERVUS		16	9	--	1	8
..STENELMIS		1	--	--	--	--
..DIPTERA						
..CERATOPOGONIDAE=HELEIDAE		--	--	--	--	--
..UNKNOWN GENUS		--	1	--	--	--
..CHIRONOMIDAE		--	--	--	--	--
..ABLABESMYIA		--	--	--	--	--
..CARDIOCLADIUS		--	4	--	--	--
..CONCHAPELOPIA		3	--	--	--	--
..CRICOTOPUS		39	23	--	8	--
..EUKIEFFERIELLA		2	--	--	1	--
..LIMNOCHIRONOMUS		--	--	--	--	4
..METRIOCNEMUS		--	--	--	--	--
..MICROTENDIPES		4	--	--	--	--
..ORTHOCALDIUS		14	--	--	1	32
..POLYPEDILUM		12	--	--	--	--
..PSEUDODIAMESA		--	19	--	--	--
..RHEOTANYTARSUS		50	95	--	--	140
..TANYTARSUS		1	--	--	--	--
..THIENEMANNIELLA		5	2	--	--	--
..UNKNOWN GENUS		--	--	36	--	--
..EMPIDIDAE		--	--	--	--	--
..HEMERODROMIA		1	6	--	--	--
..UNKNOWN GENUS		--	--	--	--	28
..SIMULIIDAE		5	2	1	8	8
..TIPULIDAE		--	--	--	--	--
..ANTOCHA		15	34	6	15	56
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS		--	--	--	--	--
..PSEUDOCLOEON		1	13	--	--	4
..EPHEMERELLIDAE		--	--	--	--	--
..EPHEMERELLA		1	2	1	--	--
..HEPTAGENIIDAE		--	--	--	--	--
..STENONEMA		2	42	--	--	--
..SIPHONURIDAE		--	--	--	--	--
..ISONYCHIA		3	--	4	--	--
..MEGALOPTERA						
..CORYDALIDAE		--	2	--	--	--
..CORYDALUS		--	--	--	--	--
..PLECOPTERA						
..UNKNOWN FAMILY		--	--	--	--	--
..UNKNOWN GENUS		2	--	--	--	--
..CAPNIIDAE		--	--	--	--	--
..UNKN GENUS		--	1	--	--	--
..PERLODIDAE		--	--	--	--	--
..ISOPERLA		--	--	--	--	--
..TAENIOPTERYGIDAE		--	--	--	--	--
..TAENIOPTERYX		--	--	--	1	--
..TRICHOPTERA						
..GLOSSOSOMATIDAE		--	--	--	--	--
..GLOSSOSOMA		1	--	--	--	--
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE		27	188	46	12	200
..HYDROPSYCHE		176	360	94	8	16
..MACRONEMA		--	--	9	--	--
..PARAPSYCHE		--	--	2	--	--
..SYMPHITOPSYCHE		--	--	--	22	268
..HYDROPTILIDAE		--	--	--	--	--
..HYDROPTILA		--	--	6	--	--
..LEUCOTRICHIA		--	16	--	--	92
..PHILOPOTAMIDAE		--	--	--	--	--
..CHIMARRA		--	4	--	--	--
..DOLOPHILODES		1	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE		--	--	--	--	--
..FERRISSIA		1	4	--	1	--
..LYMNAEIDAE		--	--	--	--	--
..LYMNAEA		--	--	--	--	4
..PHYSIDAE		1	--	--	--	--
..PHYSA		--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE		--	--	--	2	--
..UNKNOWN GENUS		--	--	--	--	--
..UNKNOWN FAMILY		--	--	--	--	--
..UNKNOWN GENUS		--	--	--	--	4

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	01479680 WEST BRANCH RED CLAY CR AT KENNETT SQUARE, PA					
	JUN 2 70 0000	OCT 27 70 0000	MAY 18 71 0000	OCT 12 71 0000	OCT 17 72 0000	OCT 8 73 0000
TOTAL COUNT	81	182	185	30	177	108
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA	--	--	--	--	--	1
..PLESIOPORA						
..NAIDIDAE						
..UNKNOWN GENUS	--	--	--	--	--	--
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
..CRUSTACEA						
..AMPHIPODA						
..GAMMARIDAE	--	--	--	--	--	--
..GAMMARUS						
..ISOPODA						
..ASELLIDAE	--	--	--	--	--	--
..ASELLUS						
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
..OPTIOSERVUS	--	--	--	--	--	--
..DIPTERA						
..CHIRONOMIDAE	41	--	68	--	18	7
..CHAETOCLESIUS	--	--	--	--	--	--
..CHIRONOMUS	--	--	--	--	--	--
..CRICOTOPUS	--	--	--	--	--	--
..EUKIEFFERIELLA	--	--	--	--	--	--
..GOELDICHIRONOMUS	--	--	--	--	--	--
..LIMNOCHIRONOMUS	--	--	--	--	--	--
..ORTHOCLESIUS	--	--	--	--	--	--
..POLYPTILUM	--	--	--	--	--	--
..PSEUDOCLESIUS	--	--	--	--	--	--
..RHEOTANYTARSUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	--	--
..EMPIDIDAE	--	--	--	--	3	--
..HEMERODROMIA	--	--	--	--	--	--
..SIMULIIDAE						
..SIMULIUM	26	182	117	9	145	3
..TIPULIDAE	--	--	--	--	--	1
..ANTOCHA						
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	8	--	--	--	--	--
..PSEUDOCLOEON	--	--	--	--	--	--
..EPHEMERELLIDAE	--	--	--	--	--	--
..EPHEMERELLA	--	--	--	--	--	--
..HEPTAGENIIDAE	--	--	--	--	--	--
..STENONEMA	--	--	--	1	--	--
..TRICHOPTERA						
..HYDROPSYCHIDAE	--	--	--	2	9	78
..CHEUMATOPSYCHE	--	--	--	18	2	18
..HYDROPSYCHE	6	--	--	--	--	--
..MACRONEMA	--	--	--	--	--	--
..SYMPHITOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE	--	--	--	--	--	--
..OCHROTRICHIA	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE	--	--	--	--	--	--
..FERRISSIA	--	--	--	--	--	--
..LYMNAEIDAE	--	--	--	--	--	--
..LYMNAEA	--	--	--	--	--	--
..PHYSIDAE	--	--	--	--	--	--
..PHYSA	--	--	--	--	--	--
..PLANORBIDAE	--	--	--	--	--	--
..MENETUS	--	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE	--	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--	--

01479680 WEST BRANCH RED CLAY CR AT KENNETT SQUARE, PA						
DATE	NOV 6,75	OCT 29,76	NOV 1,77	OCT 25,78	NOV 6,79	NOV 17,80
TIME	1030	1245	1000	1145	0800	0945
TOTAL COUNT	60	172	70	20	29	556
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA	--	--	--	--	--	--
..PLESIOPORA						
..NAIDIDAE						
....UNKNOWN GENUS	--	12	--	--	1	--
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
....UNKNOWN GENUS	2	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
....UNKNOWN FAMILY						
....UNKNOWN GENUS	--	1	--	--	--	--
..CRUSTACEA						
..AMPHIPODA						
....GAMMARIDAE	--	--	1	--	--	--
....GAMMARUS						
..ISOPODA						
....ASELLIDAE	--	--	--	--	1	--
....ASELLUS						
..INSECTA						
..COLEOPTERA						
....ELMIDAE						
....OPTIOSERVUS	--	1	--	--	--	--
..DIPTERA						
....CHIRONOMIDAE	--	--	--	--	--	--
....CHAETOCCLADIUS	--	1	--	--	--	--
....CHIRONOMUS	1	--	--	--	--	--
....CRICOTOPUS	18	18	6	--	13	64
....EUKIEFFERIELLA	--	6	--	--	--	--
....GOELDICHIRONOMUS	--	--	1	--	--	--
....LIMNOCHIRONOMUS	--	2	--	2	--	8
....ORTHOCLADIUS	--	--	--	6	--	--
....POLYPEDILUM	5	--	--	--	--	--
....PSECTOCCLADIUS	9	--	--	--	--	--
....RHEOTANTARSUS	1	--	--	--	--	--
....THIENEMANNIELLA	--	--	--	--	--	--
..EMPIDIDAE	--	--	--	--	--	--
..HEMERODROMIA	--	--	--	--	1	--
..SIMULIIDAE	4	106	3	1	8	424
..SIMULIUM						
..TIPULIDAE	1	--	--	--	--	--
..ANTOCHA						
..EPHEMEROPTERA						
..BAETIDAE						
....BAETIS	--	--	--	--	--	--
....PSEUDOCLOSON	--	1	--	--	--	--
..EPHEMERELLIDAE						
....EPHEMERELLA	1	--	--	--	--	--
..HEPTAGENIIDAE						
..STENONEMA	--	--	--	--	--	--
..TRICHOPTERA						
....HYDROPSYCHIDAE						
....CHEUMATOPSYCHE	5	3	--	--	--	--
....HYDROPSYCHE	6	--	--	--	--	--
....MACRONEMA	--	2	--	--	--	--
....SYMPHITOPSYCHE	--	--	--	--	1	--
..HYDROPTILIDAE						
....OCHROTRICHIA	--	1	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
....ANCYLIDAE						
....FERRISSIA	2	19	53	10	2	--
..LYMNAEIDAE						
....LYMNAEA	--	--	--	1	--	--
..PHYSIDAE	--	1	6	--	--	--
..PLANORBIDAE						
....MENETUS	--	1	--	--	--	--
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE						
....UNKNOWN GENUS	--	--	--	--	2	60

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	01479800 EAST BRANCH RED CLAY CREEK NEAR FIVE POINT, PA.				
	JUN 2 70 0000	OCT 27 70 0000	MAY 18 71 0000	OCT 12 71 0000	OCT 17 72 0000
TOTAL COUNT	198	61	210	7	181
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA					
..OLIGOCHAETA					
..PLESIOPODA					
...NAIDIDAE					
...UNKNOWN GENUS	--	--	--	--	--
...UNKNOWN ORDER					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	--	--	--	--	--
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	--	--	--	--	--
..INSECTA					
...COLEOPTERA					
...ELMIDAE					
...OPTIOSERVUS	--	--	--	--	--
...DIPTERA					
...CHIRONOMIDAE	7	--	72	--	10
...CARDIOCLADIUS	--	--	--	--	--
...CRICOTOPUS	--	--	--	--	--
...ORTHOCLADIUS	--	--	--	--	--
...RHEOTANTARSUS	--	--	--	--	--
...EMPIDIDAE	--	--	--	--	--
...HEMERODROMIA	--	--	--	--	--
...SIMULIIDAE					
...SIMULIUM	158	--	118	1	--
...TIPULIDAE					
...TIPULIDAE	--	--	1	--	9
...ANTOCH					
..EPHEMEROPTERA					
...BAETIDAE					
...BAETIS	9	--	--	--	--
...UNKNOWN GENUS	--	--	--	--	--
...EPHEMERELLIDAE					
...EPHEMERELLA	4	3	6	--	--
...HEPTAGENIIDAE					
...STENONEMA	--	--	--	--	--
...SIPHONURIDAE					
...AMELETUS	1	--	--	--	--
...ISONYCHIA	--	--	--	--	--
..HYMENOPTERA					
..MEGALOPTERA					
...CORYDALIDAE					
...NIGRONIA	--	--	--	--	--
..ODONATA					
...AESHNIDAE					
...BOYERIA	--	--	--	--	--
...COENAGRIONIDAE					
...ARGIA	2	--	--	--	--
..TRICHOPTERA					
...HYDROPSYCHIDAE					
...CHEUMATOPSYCHE	--	--	6	5	74
...HYDROPSYCHE	15	58	7	1	85
...HYDROPTILIDAE					
...LEUCOTRICHIA	--	--	--	--	3
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
...BASOMMATOPHORA					
...ANCYLIDAE					
...FERRISSIA	--	--	--	--	--
...PHYSIDAE					
...PHYSA	--	--	--	--	--
NEMATODA (NEMATODES)					
..UNKNOWN CLASS					
...UNKNOWN ORDER					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	--	--	--	--	--

		01479800		EAST BRANCH RED CLAY CREEK NEAR FIVE POINT, PA.		
DATE		OCT 8, 73	OCT 29, 76	NOV 1, 77	NOV 8, 79	NOV 17, 80
TIME		0000	1330	1130	0900	1100
TOTAL COUNT		473	826	1463	239	468
ORGANISM		COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..PLESIOPORA						
...NAIDIDAE						
...UNKNOWN GENUS	--	--	--	--	1	--
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
...UNKNOWN GENUS	--	--	--	1	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	4	5	3	--	--	4
INSECTA						
..COLEOPTERA						
...ELMIDAE						
...OPTIOSERVUS	1	3	3	--	--	--
..DIPTERA						
...CHIRONOMIDAE	6	--	--	--	--	--
...CARDIOCLADIUS	--	2	--	--	--	--
...CRICOTOPUS	--	11	125	181	--	8
...ORTHOCCLADIUS	--	--	--	--	--	--
...RHOTANYTARSUS	--	3	23	2	--	4
..EMPIDIDAE						
...HEMERODROMIA	--	2	5	--	--	--
..SIMULIIDAE						
...SIMULIUM	2	348	1044	49	--	444
..TIPULIDAE						
...ANTOCIA	6	8	1	--	--	--
EPHEMEROPTERA						
..BAETIDAE						
...BAETIS	3	--	--	--	--	--
...UNKNOWN GENUS	--	--	1	--	--	--
..EPHEMERELLIDAE						
...EPHEMERELLA	--	--	--	--	--	--
..HEPTAGENIIDAE						
...STENONEMA	1	--	--	--	--	--
..SIPHONURIDAE						
...AMELETUS	--	--	--	--	--	--
...ISONYCHIA	1	--	--	--	--	--
HYMENOPTERA						
..MEGALOPTERA						
...CORYDALIDAE						
...NIGRONIA	--	1	4	--	--	--
..ODONATA						
...AESHNIDAE						
...BOYERIA	--	1	--	--	--	--
..COENAGRIONIDAE						
...ARGIA	--	--	--	--	--	--
..TRICHOPTERA						
...HYDROPSYCHIDAE						
...CHEUMATOPSYCHE	269	188	1	--	--	--
...HYDROPSYCHE	178	240	--	--	--	--
..HYDROPTILIDAE						
...LEUCOTRICHIA	1	2	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
...BASOMMATOPHORA						
...ANCYLIDAE						
...FERRISSIA	--	12	250	8	--	--
..PHYSIDAE						
...PHISA	--	--	1	--	--	8
NEMATODA (NEMATODES)						
..UNKNOWN CLASS						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
...UNKNOWN GENUS	--	--	1	--	--	--

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	01480434 WEST BRANCH BRANDYWINE CR AT ROCK RUN, PA					
	NOV 11, 70 0000	MAY 25, 71 0000	OCT 19, 71 0000	OCT 2, 72 0000	OCT 10, 73 0000	OCT 29, 74 0000
TOTAL COUNT	88	57	20	128	117	113
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS						
INSECTA						
..COLEOPTERA					1	
..ELMIDAE						
..OPTIOSERVUS						
..STENELMIS						
DIPTERA						
..CHIRONOMIDAE	1			4	5	2
..CARDIOCLADIUS						
..CONCHAPELOPIA						
..CORYNONEURA						
..CRICOTOPUS						
..DIAMESA						
..EUKIEFFERIELLA						
..MICROTENDIPES						
..ORTHOCCLADIUS						
..PARAMETRICNEMUS						
..PSEUDODIAMESA						
..RHEOTANYTARSUS						
..SYNORTHOCCLADIUS						
..THIENEMANNIELLA						
..EMPIDIDAE						
..HEMERODROMIA						
..SIMULIIDAE						
..SIMULIUM				1		
..TIPULIDAE					4	1
..ANTOCHA					1	
..UNKNOWN GENUS						
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	2	10		27	1	
..PSEUDOCLOEON						
..EPHEMERELLIDAE						
..EPHEMERELLA		11		1		
..HEPTAGENIIDAE						
..STENONEMA	28	6		5		
..UNKNOWN GENUS						
..LEPTOPHLEBIIDAE						
..PARALEPTOPHLEBIA						
..SIPHONURIDAE						
..ISONCHIA				10	3	
..LEPIDOPTERA					2	
..MEGALOPTERA						
..CORYDALIDAE						
..CORYDALUS						
..PLECOPTERA						
..LEUCITIDAE						
..LEUCTRA						
..PERLIDAE						
..ACRONEURIA	3	4			2	
..PARAGNETINA				1		1
..TAENIOPTERYGIDAE						
..TAENIOPTERYX						
TRICHOPTERA						
..BRACHYCENTRIDAE						
..MICRASEMA						
..GLOSSOSOMATIDAE				1	2	
..GLOSSOSOMA						
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE	7	5	7	14	30	21
..HYDROPSYCHE	24	21	13	47	48	73
..SYMPHITOPSYCHE						
..HYDROPTILIDAE						
..LEUCOTRICHIA				6	1	
..MOLANNIDAE						
..MOLANNA	1					
..PHILOPOTAMIDAE						
..CHIMARRA				9	11	14
..DOLOPHILODES				1		
..POLYCENTROPIDIDAE						
..CYRNELLUS						
..NEURECLIPSIS				1		
..NYCTIOPHYLAX						
..POLYCENTROPUS					2	
..PSYCHOMYIIDAE						
..PSYCHOMYIA						
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE						
..FERRISSIA					5	
..MESOGASTROPODA						
..VIVIPARIDAE					1	
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE						1



		01480434 WEST BRANCH BRANDYWINE CR AT ROCK RUN, PA					
DATE	OCT 30 75	OCT 19 78	NOV 2 77	NOV 2 78	NOV 2 79	NOV 14 80	
TIME	0815	1015	1530	1630	1245	1015	
TOTAL COUNT	40	266	221	85	77	468	
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT	
ARTHROPODA (ARTHROPODS)							
..ARACHNIDA							
..HYDRACARINA							
..UNKNOWN FAMILY							
..UNKNOWN GENUS	--	1	--	--	--	4	
..INSECTA							
..COLEOPTERA							
..ELMIDAE	1	10	--	--	--	4	
..OPTIOSERVUS	--	3	1	--	--	--	
..STENELMIS							
..DIPTERA							
..CHIRONOMIDAE	--	--	--	--	--	--	
..CARDIOCLADIUS	1	--	--	--	--	--	
..CONCHAPELOPIA	--	2	--	--	--	--	
..CORYNONEURA	--	1	--	--	--	--	
..CRICOTOPUS	4	19	27	--	19	52	
..DIAMESA	--	--	--	--	--	4	
..EUKIEFFERIELLA	--	3	--	--	10	4	
..MICROTENDIPES	--	--	--	--	--	4	
..ORTHOCCLADIUS	3	--	--	1	23	28	
..PARAMETRICNEMUS	--	--	--	--	--	4	
..PSEUDODIAMESA	--	--	2	--	--	--	
..RHEOTANYTARSUS	3	21	11	2	3	60	
..SYNORTHOCCLADIUS	--	--	--	--	--	4	
..THIENEMANNIELLA	--	3	--	--	--	4	
..EMPIDIDAE							
..HEMEROPTEROMIA	--	1	--	--	--	--	
..SIMULIIDAE							
..SIMULIUM	--	2	1	2	1	4	
..TIPULIDAE							
..ANTIOCHA	--	4	16	--	--	8	
..UNKNOWN GENUS	--	--	--	--	--	--	
..EPHEMEROPTERA							
..BAETIDAE							
..BAETIS	--	2	--	--	--	--	
..PSEUDOCLOEON	3	--	11	--	--	--	
..EPHEMERELLIDAE	--	5	2	1	--	4	
..EPHEMERELLA							
..HEPTAGENIIDAE							
..STENONEMA	2	20	12	8	--	16	
..UNKNOWN GENUS	--	--	--	--	1	--	
..LEPTOPHLEBIIDAE	--	--	--	--	--	--	
..PARALEPTOPHLEBIA	--	1	--	--	--	--	
..SIPHONURIDAE							
..ISONYCHIA	1	25	10	8	1	28	
..LEPIDOPTERA	--	--	--	--	--	--	
..MEGALOPTERA							
..CORYDALIDAE	--	--	1	--	1	--	
..CORYDALIS							
..PLECOPTERA							
..LEUCTRIDAE	--	--	--	--	--	4	
..LEUCTRA							
..PERLIDAE							
..ACRONETRIA	1	2	--	--	--	--	
..PARAGNETINA	--	--	--	--	--	4	
..TAENIOPTERYGIDAE							
..TAENIOPTERYX	--	4	16	--	2	28	
..TRICHOPTERA							
..BRACHYCENTRIDAE	--	--	--	--	--	4	
..MICRASEMA							
..GLOSSOSOMATIDAE	--	--	--	5	--	--	
..GLOSSOSOMA							
..HYDROPSYCHIDAE							
..CHEUMATOPSYCHE	5	35	31	--	4	60	
..HYDROPSYCHE	16	71	72	48	11	80	
..SYMPHITOPSYCHE	--	--	--	8	--	--	
..HYDROPTILIDAE							
..LEUCOTRICHIA	--	8	1	1	--	24	
..MOLANIDAE							
..MOLANNA	--	--	--	--	--	--	
..PHILOPOTAMIDAE							
..CHIMARRA	--	3	--	1	--	12	
..DOLOPHILODES	--	--	--	--	--	--	
..POLYCENTROPODIDAE							
..CYRANELLUS	--	--	--	--	--	12	
..NEURECLIPSIS	--	--	--	--	--	--	
..NYCTIOPHYLAX	--	1	--	--	--	4	
..POLYCENTROPUS	--	--	--	--	--	--	
..PSYCHOMYIIDAE	--	4	1	--	--	--	
..PSYCHOMYIA							
MOLLUSCA (MOLLUSCS)							
..GASTROPODA							
..BASOMMATOPHORA							
..ANCYLIDAE	--	15	8	--	1	4	
..FERRISSIA							
..MESOGASTROPODA	--	--	--	--	--	--	
..VIVIPARIDAE							
PLATYHELMINTHES (FLATWORMS)							
..TURBELLARIA							
..TRICLADIA	--	--	--	--	--	--	
..PLANARIIDAE							

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	BUCK RUN AT DOE RUN, PA.			
	01480629 OCT 10, 73 0000	OCT 29, 74 0000	NOV 11, 75 1430	OCT 28, 76 1345
TOTAL COUNT	346	54	790	218
ORGANISM	COUNT	COUNT	COUNT	COUNT
ANNELIDA				
..OLIGOCHAETA				
..UNKNOWN ORDER				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	1	--
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
..HYDRACARINA				
..UNKNOWN FAMILY				
..UNKNOWN GENUS#2	--	--	--	--
..UNKNOWN GENUS#3	--	--	--	--
..INSECTA				
..COLEOPTERA				
..ELMIDAE				
..DUBIRAPHIA	--	--	1	--
..OPTIOSERVUS	--	--	2	1
..STENELMIS	--	--	--	--
..DIPTERA				
..CHIRONOMIDAE	--	8	--	--
..ABLABESMYIA	--	--	10	2
..CARDIOCLADIUS	--	--	39	1
..CORYNONEURA	--	--	--	16
..CRICOTOPUS	--	--	--	4
..EUKTEPPERIELLA	--	--	--	--
..GLYPTOTENDIPES	--	--	--	--
..ORTHOCLADIUS	--	--	87	9
..PSECTROCLADIUS	--	--	--	--
..RHECTANTYARSUS	--	--	194	--
..THIENEMHIELLA	--	--	--	--
..UNKN ORTHOCLADIINAE #1	--	--	--	--
..UNKNOWN GENUS	--	--	--	--
..EMPIDIDAE				
..HEMERODROMIA	--	4	8	1
..SIMULIIDAE				
..SIMULIUM	4	--	19	163
..TIPULIDAE				
..ANTOCHA	--	--	4	--
..EPHEMEROPTERA				
..BAETIDAE				
..BAETIS	2	--	1	2
..PSEUDOCLOEON	--	--	--	--
..EPHEMERELLIDAE				
..EPHEMERELLA	--	--	3	--
..HEPTAGENIIDAE	--	--	7	--
..STENONEMA	--	--	--	--
..SIPHONURIDAE				
..ISONYCHIA	1	--	2	--
..MEGALOPTERA				
..CORYDALIDAE				
..CORYDALUS	--	--	--	--
..TRICHOPTERA				
..HYDROPSYCHIDAE				
..CHEUMATOPSYCHE	49	11	100	12
..HYDROPSYCHE	276	30	294	5
..SYMPHITOPSYCHE	--	--	--	--
..HYDROPTILIDAE				
..LEUCOTRICHIA	12	--	13	--
MOLLUSCA (MOLLUSCS)				
..GASTROPODA				
..BASOMMATOPHORA				
..ANCYLIDAE				
..FERRISSIA	--	--	--	1
..PHYSIDAE				
..PHYSA	1	--	4	--
NEMATODA (NEMATODES)				
..UNKNOWN CLASS				
..UNKNOWN ORDER				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	1	--
PLATYHELMINTHES (PLATWORMS)				
..TURBELLARIA				
..TRICLADIDA				
..PLANARIIDAE	1	1	--	--
..UNKNOWN GENUS	--	--	--	--
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	--	1
..UNKNOWN ORDER				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	--	--

	01480629 BUCK RUN AT DOE RUN, PA.			
DATE	NOV 2, 77	OCT 25, 78	NOV 7, 79	NOV 13, 80
TIME	1430	1830	1000	1030
TOTAL COUNT	795	12	5	420
ORGANISM	COUNT	COUNT	COUNT	COUNT
ANNELIDA				
..OLIGOCHAETA				
...UNKNOWN ORDER				
...UNKNOWN FAMILY				
...UNKNOWN GENUS	--	--	--	--
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
...HYDRACARINA				
...UNKNOWN FAMILY				
...UNKNOWN GENUS#2	5	--	--	--
...UNKNOWN GENUS#3	7	--	--	--
..INSECTA				
...COLEOPTERA				
...ELMIDAE				
...DUBIRAPHIA	--	--	--	--
...OPTIOSERVUS	4	--	--	4
...STENELMIS	2	--	--	--
...DIPTERA				
...CHIRONOMIDAE	--	--	--	--
...ABLABESMYIA	--	--	--	--
...CARDIOCLADIUS	--	--	--	--
...CORYNONEURA	--	--	--	--
...CHICOTOPUS	53	--	--	--
...EUKTEPTELLA	--	--	--	--
...GLYPTOTENDIPES	4	--	--	--
...ORTHOCLADIUS	2	--	--	--
...PSECTROCLADIUS	8	--	--	--
...RHEOTANYTARSUS	90	--	1	--
...THIENEMNIELLA	1	--	--	--
...UNKN ORTHOCLADIINAE #1	--	1	--	--
...UNKNOWN GENUS	1	--	--	--
...EMPIDIDAE				
...HEMERODROMIA	17	--	--	--
...SIMULIIDAE				
...SIMULIUM	19	--	--	24
...TIPULIDAE				
...ANTOCHA	--	--	--	20
...EPHEMEROPTERA				
...BAETIDAE				
...BAETIS	--	--	--	--
...PSEUDOCLOEON	--	1	--	--
...EPHEMERELLIDAE				
...EPHEMERELLA	3	--	--	--
...HEPTAGENIIDAE				
...STENONEMA	4	--	--	60
...SIPHONURIDAE				
...ISONYCHIA	1	--	--	4
...MEGALOPTERA				
...CORYDALIDAE				
...CORYDALUS	1	--	--	--
...TRICHOPTERA				
...HYDROPSYCHIDAE				
...CHEUMATOPSYCHE	524	9	1	64
...HYDROPSYCHE	4	--	1	200
...SYMPHITOPSYCHE	--	--	1	--
...HYDROPTILIDAE				
...LEUCOTRICHIA	4	--	--	28
MOLLUSCA (MOLLUSCS)				
..GASTROPODA				
...BASOMMATOPHORA				
...ANCYLIDAE				
...FERRISSIA	38	--	--	4
...PHYSIDAE				
...PHYSA	--	--	1	--
NEMATODA (NEMATODES)				
..UNKNOWN CLASS				
...UNKNOWN ORDER				
...UNKNOWN FAMILY				
...UNKNOWN GENUS	3	--	--	--
PLATYHELMINTHES (PLATWORMS)				
..TREBELLARIA				
...TRICLADIDA				
...PLANARIIDAE	--	--	--	--
...UNKNOWN GENUS	--	--	--	12
...UNKNOWN FAMILY	--	--	--	--
...UNKNOWN GENUS	--	--	--	--
...UNKNOWN ORDER	--	--	--	--
...UNKNOWN FAMILY	--	1	--	--
...UNKNOWN GENUS	--	--	--	--

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	01480632	DOE RUN AT SPRINGDELL, Pa.		
	OCT 10, 73 0000	OCT 29, 74 0000	NOV 11, 75 1330	OCT 28, 76 1415
TOTAL COUNT	15	147	575	836
ORGANISM	COUNT	COUNT	COUNT	COUNT
ANNELIDA				
..OLIGOCHAETA				
..UNKNOWN ORDER				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	--	1
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
..HYDRACARINA				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	1	3
..INSECTA				
..COLEOPTERA				
..ELMIDAE				
..OPTIOSERVUS	1	--	1	4
..PSEPHENIDAE				
..PSEPHENUS	--	--	--	1
..DIPTERA				
..CHIRONOMIDAE	9	3	--	--
..ABLABESMYIA	--	--	7	--
..BRILLIA	--	--	7	--
..CARDIOCLADIUS	--	--	106	--
..CONCHAELOPIA	--	--	--	3
..CRICOTOPUS	--	--	--	23
..DIAMESA	--	--	42	--
..EUKISPEPPIELLA	--	--	--	18
..ORTHOCLADIUS	--	--	21	--
..POLYPEDILUM	--	--	--	--
..RHEOTANYTARSUS	--	--	50	4
..THIENEMANNIELLA	--	--	14	--
..EMPIDIDAE				
..HEMERODROMIA	--	--	1	1
..SIMULIIDAE				
..SIMULIUM	--	--	12	11
..TIPULIDAE				
..ANTOCHA	1	--	40	5
..HEXATOMA	--	--	--	--
..EPHEMEROPTERA				
..BAETIDAE				
..BAETIS	--	1	1	--
..PSEUDOCLOEON	--	--	18	8
..EPHEMERELLIDAE	--	--	21	66
..EPHEMERELLA	--	--	--	--
..HEPTAGENIIDAE				
..STENONEMA	1	1	20	41
..SIPHONURIDAE				
..ISONYCHIA	--	2	2	48
..LEPIDOPTERA				
..PYRALIDIDAE				
..PARARGYACTIS	--	--	--	--
..MEGALOPTERA				
..CORYDALIDAE				
..CORYDALUS	--	--	--	1
..PLECOPTERA				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	--	1
..TAENIOPTERYGIDAE				
..TAENIOPTERYX	--	--	1	2
..TRICHOPTERA				
..GLOSSOSOMATIDAE				
..GLOSSOSOMA	--	--	5	3
..HYDROPSYCHIDAE				
..CHEUMATOPSYCHE	1	32	91	59
..HYDROPSYCHE	1	106	105	508
..SYMPHITOPSYCHE	--	--	--	--
..HYDROPTILIDAE				
..HYDROPTILA	--	--	--	--
..LEUCOTRICHIA	--	--	4	5
..PHILOPOTAMIDAE				
..CHIMARRA	--	--	1	3
..DOLOPHILODES	--	--	4	1
..POLYCENTROPODIDAE				
..CYRNELLUS	--	--	--	--
MOLLUSCA (MOLLUSCS)				
..GASTROPODA				
..BASOMMATOPHORA				
..ANCYLIDAE				
..FERRISSIA	--	2	--	18
PLATYHELMINTHES (FLATWORMS)				
..TURBELLARIA				
..TRICLADIDA				
..PLANARIIDAE	1	--	--	--
..UNKNOWN GENUS	--	--	--	--

DATE TIME	01480632	DOE RUN AT SPRINGDELL, PA.		
	NOV 2 77 1330	OCT 28 78 1545	NOV 7 79 1045	NOV 13 80 0800
TOTAL COUNT	865	42	150	828
ORGANISM	COUNT	COUNT	COUNT	COUNT
ANNELIDA				
..OLIGOCHAETA				
...UNKNOWN ORDER				
...UNKNOWN FAMILY				
...UNKNOWN GENUS	--	--	--	--
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
...HYDRACARINA				
...UNKNOWN FAMILY				
...UNKNOWN GENUS	5	--	--	--
..INSECTA				
...COLEOPTERA				
...ELMIDAE				
...OPTIOSERVUS	4	--	7	--
...PSEPHENIDAE	--	--	--	--
...PSEPHENUS	--	--	--	--
...DIPTERA				
...CHIRONOMIDAE	--	--	--	--
...ABLABESMYIA	--	--	--	--
...BRILLIA	--	--	--	--
...CARDIOCLADIUS	14	--	--	--
...CONCHAPELOPIA	1	--	--	4
...CRICOTOPUS	31	1	9	16
...DIAMESA	--	--	--	--
...EUKIEFFERIELLA	11	--	--	--
...ORTHOCADIUS	--	2	11	8
...POLYPETILUM	3	--	--	--
...RHEOTANYTARSUS	10	--	--	44
...THIENEMANNIELLA	--	--	--	--
...EMPIDIDAE				
...HEMERODROMIA	--	--	1	--
...SIMULIIDAE				
...SIMULIUM	6	2	1	12
...TIPULIDAE				
...ANTOCHA	36	--	7	80
...HEXATOMA	--	1	--	--
..EPHEMEROPTERA				
...BAETIDAE				
...BAETIS	--	--	--	24
...PSEUDOCLOEON	4	--	1	--
...EPHEMERELLIDAE				
...EPHEMERELLA	48	--	--	--
...HEPTAGENIIDAE				
...STENONEMA	21	6	8	32
...SIPHONURIDAE				
...ISONYCHIA	40	7	5	52
..LEPIDOPTERA				
...PYRALIDAE				
...PARARGYCTIS	1	--	--	--
..MEGALOPTERA				
...CORYDALIDAE				
...CORYDALUS	--	--	--	--
..PLECOPTERA				
...UNKNOWN FAMILY				
...UNKNOWN GENUS	--	--	--	--
...TAENIOPTERYGIDAE				
...TAENIOPTERYX	--	--	--	--
..TRICHOPTERA				
...GLOSSOSOMATIDAE				
...GLOSSOSOMA	--	--	2	--
...HYDROPSYCHIDAE				
...CHEUMATOPSYCHE	80	--	21	20
...HYDROPSYCHE	244	2	9	240
...SYMPHITOPSYCHE	--	21	58	--
...HYDROPTILIDAE				
...HYDROPTILA		--	--	8
...LEUCOTRICHIA	57	--	2	48
...PHILOPOTAMIDAE				
...CHIMARRA	39	--	3	4
...DOLOPHLODES	--	--	--	--
...POLYCENTROPIDIDAE				
...CYRNELLUS	--	--	--	4
MOLLUSCA (MOLLUSCS)				
..GASTROPODA				
...BASOMMATOPHORA				
...ANCYLIDAE				
...FERRISSIA	10	--	--	4
PLATYHELMINTHES (FLATWORMS)				
..TURBELLARIA				
...TRICLADIDA				
...PLANARIIDAE	--	--	--	--
...UNKNOWN GENUS	--	--	4	28

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

	01480640		WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA.		
DATE	NOV 11, 70	MAY 25, 71	OCT 19, 71	OCT 2, 72	OCT 30, 75
TIME	0000	0000	0000	0000	1020
TOTAL COUNT	58	5	28	507	277
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	--	--	--
..INSECTA					
..COLEOPTERA					
..ELMIDAE					
..OPTIOSERVUS	--	--	--	--	--
..STENELMIS	--	--	--	--	--
..COLLEMBOLA					
..SMYNTHERIDAE	--	--	--	--	--
..SMYNTHERIDES	--	--	--	--	--
..DIPTERA					
..CHIRONOMIDAE	--	1	--	39	--
..CRICOTOPUS	--	--	--	--	4
..LIMNOCHIRONOMUS	--	--	--	--	--
..ORTHOCCLADIUS	--	--	--	--	8
..PARAMETRICNEMUS	--	--	--	--	--
..POLYPEDILUM	--	--	--	--	--
..RHOTANTARSUS	--	--	--	--	--
..EMPIDIDAE	--	--	--	1	--
..HEMERODROMIA	--	--	--	--	--
..SIMULIIDAE	--	--	--	18	2
..SIMULIUM	--	--	--	--	--
..TIPULIDAE	--	--	--	1	7
..ANTOCHA	--	--	--	--	--
..EPHEMEROPTERA					
..BAETIDAE					
..BAETIS	--	--	--	1	--
..PSEUDOCLOSON	--	--	--	3	1
..EPHEMERELLIDAE	--	--	--	--	--
..EPHEMERELLA	--	1	--	--	--
..HEPTAGENIIDAE	--	--	--	--	--
..STENONEMA	--	1	--	3	3
..SIPHONURIDAE	--	--	--	--	--
..ISONYCHIA	--	--	--	2	--
..HYMENOPTERA	--	--	--	--	--
..MYMARIDAE	--	--	--	1	--
..LEPIDOPTERA					
..PYRALIDIDAE	--	--	--	--	1
..PARARGYACTIS	--	--	--	--	--
..MEGALOPTERA	--	--	--	--	--
..CORYDALIDAE	--	--	--	--	--
..CORYDALUS	--	--	--	--	--
..ODONATA					
..AGRIIDAE	--	--	--	--	--
..AGRION	--	--	--	--	--
..COENAGRIONIDAE	--	--	--	--	--
..ARGIA	--	--	--	--	--
..PLECOPTERA					
..TAENIOPTERYGIDAE	--	--	--	--	3
..TAENIOPTERYX	--	--	--	--	--
..TRICHOPTERA					
..HYDROPSYCHIDAE	--	--	--	--	--
..CHEUMATOPSYCHE	--	--	9	133	82
..HYDROPSYCHE	56	2	17	305	176
..POTAMYIA	--	--	--	--	--
..SYMPHITOPSYCHE	--	--	--	--	--
..HYDROPTILIDAE	--	--	--	--	--
..HYDROPTILA	--	--	--	--	--
..LEUCOTRICHIA	--	--	--	--	2
..POLYCENTROPIDIDAE	--	--	--	--	--
..NEURECLIPSIS	--	--	--	--	--
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
..BASOMMATOPHORA					
..ANCYLIDAE	--	--	--	--	10
..FERRISSIA	--	--	--	--	--
PLATYHELMINTHES (PLATWORMS)					
..TURBELLARIA					
..TRICLADIDA					
..UNKNOWN FAMILY	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--

01480640 WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA.					
DATE	OCT 19, 76	OCT 27, 77	NOV 3, 78	NOV 2, 79	NOV 12, 80
TIME	1130	1430	1200	1400	1400
TOTAL COUNT	196	52	195	52	464
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	1	--	--	--	--
..INSECTA					
..COLEOPTERA					
...ELMIDAE					
...OPTIOSEVUS	1	--	--	--	--
...STENELMIS	--	--	--	--	4
..COLLEMBOLA					
...SMYNTERIDAE		1	--	--	--
...SMYNTERIDES	--	--	--	--	--
..DIPTERA					
...CHIRONOMIDAE	--	--	--	--	--
...CRICOTOPUS	2	3	--	2	4
...LIMNOCHIRONOMUS	--	--	--	--	4
...ORTHOCLADIUS	--	--	6	38	--
...PARAMETRICNEMUS	--	--	1	--	--
...POLYPEDILUM	--	--	--	1	--
...RHEOTANYTARSUS	4	1	2	1	16
...EMPIDIDAE	--	--	--	--	--
...HEMERODROMIA	--	1	--	--	--
...SIMULIDAE	--	--	--	--	8
...SIMULIUM	--	--	--	--	--
...TIPULIDAE	--	--	--	--	--
...ANTOCHA	--	--	2	--	12
..EPHEMEROPTERA					
...BAETIDAE					
...BAETIS	--	--	--	1	--
...PSEUDOCLOEON	--	--	--	--	--
...EPHEMERELLIDAE	--	--	--	--	--
...EPHEMERELLA	--	--	--	--	--
...HEPTAGENIIDAE					
...STENONEMA	2	8	--	--	24
...SIPHONURIDAE	--	--	1	--	4
...ISONYCHIA	--	--	--	--	--
..HYMENOPTERA					
...MYMARIDAE	--	--	--	--	--
..LEPIDOPTERA					
...PYRALIDIDAE					
...PARARGYACTIS	13	--	2	--	32
..MEGALOPTERA					
...CORYDALIDAE					
...CORYDALUS	--	--	--	--	4
..ODONATA					
...AGRIIDAE					
...AGRION	--	2	--	--	--
...COENAGRIONIDAE	--	2	--	--	--
...ARGIA	--	--	--	--	--
..PLECOPTERA					
...TAENIOPTERYGIDAE					
...TAENIOPTERYA	1	--	--	--	--
..TRICHOPTERA					
...HYDROPSYCHIDAE	60	--	--	--	--
...CHEUMATOPSYCHE	--	30	63	--	40
...HYDROPSYCHE	104	1	8	5	240
...POTAMYIA	--	2	--	--	--
...SYMPHITOPSYCHE	--	--	110	4	--
...HYDROPTILIDAE					
...HYDROPTILA	--	--	--	--	4
...LEUCOTRICHIA	--	--	--	--	56
...POLYCENTROPODIDAE					
...NEURECLIPSIS	--	1	--	--	--
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
...BASOMMATOPHORA					
...ANCYLIDAE					
...FERRISSIA	7	--	2	--	12
PLATYHELMINTHES (FLATWORMS)					
..TURBELLARIA					
..TRICLADIDA					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	1	--	--	--	--

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	01480647	E BR BRANDYWINE CR NR STRUBLE DAM, PA.		
	OCT 11 73 0000	OCT 29 75 1545	OCT 19 76 0830	OCT 25 77 1030
TOTAL COUNT	191	228	295	12
ORGANISM	COUNT	COUNT	COUNT	COUNT
ANNELIDA				
..OLIGOCHAETA				
..PLESIOPOREA				
..NAIDIDAE				
..STYLARIA				
..UNKNOWN GENUS	--	--	1	--
..UNKNOWN ORDER				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	2	1
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
..HYDRACARINA				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	3	--	--
..CRUSTACEA				
..CYCLOPOIDA				
..CYCLOPIDAE				
..CYCLOPS	--	1	--	--
..INSECTA				
..COLEOPTERA				
..ELMIDAE				
..DUBIRAPHIA	--	--	1	--
..MICROCYLLOEPUS	--	--	--	1
..OPTIOSERVUS	1	--	--	--
..STENELMIS	1	--	--	--
..DIPTERA				
..CHIRONOMIDAE	5	--	--	--
..CARDIOCLADIUS	--	--	1	--
..CONCHAPELOPIA	--	--	--	--
..CORYNONEURA	--	--	--	--
..CRICOTOPUS	--	--	16	--
..SUKKIPFERELLA	--	--	--	--
..KIEFFERULUS	--	--	--	1
..LIMNOCHIRONOMUS	--	--	--	--
..ORTHOCLADIUS	--	--	--	--
..PARATANYTARSUS	--	--	--	--
..POLYPEDILUM	--	--	--	--
..RHEOTANYTARSUS	--	--	3	--
..TANYTARSUS	--	--	--	--
..THIENEMANNIELLA	--	--	--	--
..MUSCIDAE				
..LIMNOPHORA	1	--	--	--
..SIMULIIDAE				
..SIMULIUM	2	182	174	--
..TIPULIDAE				
..ANTOCHA	--	--	1	--
..TIPULA	1	--	--	--
..EPHEMEROPTERA				
..BAETIDAE				
..BAETIS	--	--	--	--
..UNKNOWN GENUS	--	--	1	--
..HEPTAGENIIDAE	--	1	6	--
..STENOEMA	--			
..MEGALOPTERA				
..SIALIDAE				
..SIALIS	--	--	--	--
..PLECOPTERA				
..TAenioPTERYGIDAE				
..TAENIOPTERYX	--	1	1	--
..TRICHOPTERA				
..HYDROPSYCHIDAE				
..CHEUMATOPSYCHE	42	7	17	4
..HYDROPSYCHE	126	13	28	4
..SYMPHYTOPSYCHE	--	--	--	--
..UNKNOWN GENUS	--	--	--	--
..HYDROPTILIDAE				
..HYDROPTILA	--	--	--	--
..LEUCOTRICHIA	--	--	--	--
..LIMNephilIDAE				
..APATANIA	--	--	--	--
..POLYCENTROPIDIDAE				
..NEURECLIPSIS	--	--	--	1
..PSYCHOMYIIDAE	--	--	--	--
..PSYCHOMYIA	--	--	--	--
CNIDARIA (CNIDARIANS)				
..HYDROZOA				
..HYDROIDA				
..HYDRIDAE				
..HYDRA	--	--	1	--
MOLLUSCA (MOLLUSCS)				
..BIVALVIA				
..NUCULOIDEA				
..SPHAERIIDAE				
..UNKNOWN GENUS	--	--	--	--
..GASTROPODA				
..BASOMMATOPHORA				
..ANCYLIDAE				
..PERRISSIA	--	--	1	--
..PHYSIDAE	--	--		
..PHYSA	--	--	1	--
..PLANORBIDAE	--	--	--	--
..GYRAULUS	--	--	--	--
PLATYHELMINTHES (FLATWORMS)				
..TURBELLARIA				
..TRICLADIDA				
..PLANARIIDAE	13	--	--	--
..UNKNOWN GENUS	--	20	40	--
..UNKNOWN FAMILY	--	--	--	--
..UNKNOWN GENUS	--	--	--	--



01480647

E BR BRANDYWINE CR NR STRUBLE DAM, PA.

DATE TIME	NOV 2 78 1330	NOV 8 79 0830	NOV 7 80 1000
TOTAL COUNT	25	130	188
ORGANISM	COUNT	COUNT	COUNT
ANNELIDA			
..OLIGOCHAETA			
..PLESIOPORA			
...NAIDIAE			
...STYLARIA			
...UNKNOWN GENUS	--	1	--
...UNKNOWN ORDER			
...UNKNOWN FAMILY			
...UNKNOWN GENUS	--	--	--
ARTHROPODA (ARTHROPODS)			
..ARACHNIDA			
...HYDRACARINA			
...UNKNOWN FAMILY			
...UNKNOWN GENUS	1	--	3
..CRUSTACEA			
...CYCLOPOIDA			
...CYCLOPIDAE			
...CYCLOPS	--	--	--
..INSECTA			
...COLEOPTERA			
...ELMIDAE			
...DUSIRAPHIA	--	--	--
...MICROCYLLOEPUS	--	--	--
...OPTIOSERVUS	--	1	--
...STENELMIS	--	--	--
..DIPTERA			
...CHIRONOMIDAE	--	--	--
...CARDIOCLADIUS	--	--	--
...CONCHAPELOPIA	1	--	1
...CONYNOEURA	--	--	1
...CRICOTOPIUS	2	8	--
...EUKIEFFERIELLA	--	--	1
...KIEFFERULUS	--	--	--
...LIMNOCHIRONOMUS	--	1	--
...ORTHOCLADIUS	--	--	49
...PARATANTYARSUS	--	2	--
...POLYPEDILUM	--	1	--
...RHEOTANTYARSUS	--	1	1
...TANTYARSUS	--	1	--
...THIENEMANNIELLA	--	--	1
..MUSCIDA			
...LINNORHORA	--	--	--
...STIMULIDAE			
...STIMULIUM	--	--	33
...TIPULIDAE			
...ANTOCHA	--	--	1
...TIPULA	--	--	--
..EPHEMEROPTERA			
...BAETIDAE			
...BAETIS	--	--	1
...UNKNOWN GENUS	--	--	--
...HEPTAGENIDAE	--	--	--
...STENONEMA	--	--	--
..MEGALOPTERA			
...SIALIDAE			
...SIALIS	--	--	2
..PLECOPTERA			
...TAENIOPTERYGIDAE			
...TAENIOPTERYX	--	3	3
..TRICHOPTERA			
...HYDROPSYCHIDAE			
...CHEUMATOPSYCHE	1	82	1
...HYDROPSYCHE	6	43	21
...SYMPHYTOPSYCHE	--	--	2
...UNKNOWN GENUS	--	--	--
...HYDROPTILIDAE			
...HYDROPTILA	--	1	4
...LEUCOTRICHIA	--	--	1
...LIMNEPHILIDAE			
...APATANIA	--	--	1
...POLYCENTROPIDIDAE			
...NEURECLIPSIS	--	--	--
...PSYCHOMYIIDAE			
...PSYCHOMYIA	--	--	1
CNIDARIA (CNIDARIANS)			
..HYDROZOA			
...HYDROIDA			
...HYDRIDAE			
...HYDRA	--	--	--
MOLLUSCA (MOLLUSCS)			
..BIVALVIA			
...NUCULOIDEA			
...SPHAEIIDAE			
...UNKNOWN GENUS	--	--	2
..GASTROPODA			
...BASOMMATOPHORA			
...ANCYLIDAE			
...FERRISSIA	--	--	--
...PHYSIDAE	--	--	5
...PHYSA	--	--	--
...PLANORBIDAE	--	1	5
...GYRAULUS	--	--	--
PLATHELMINTHES (FLATWORMS)			
..TURBELLARIA			
...TRICLADIDA			
...PLANARIIDAE	--	4	--
...UNKNOWN GENUS	15	--	--
...UNKNOWN FAMILY			
...UNKNOWN GENUS	--	--	44

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

	01480848	EAST BRANCH BRANDYWINE CREEK NEAR CUPOLA, PA.		
DATE	OCT 11, 73	OCT 25, 74	OCT 30, 75	OCT 19, 76
TIME	0000	0000	0830	0920
TOTAL COUNT	218	188	749	518
ORGANISM	COUNT	COUNT	COUNT	COUNT
ANNELIDA				
..OLIGOCHAETA				
..UNKNOWN ORDER				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	--	3
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
..HYDRACARINA				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	13	4
..CRUSTACEA				
..ISOPODA				
..ASELLIDAE				
..ASELLUS	--	--	2	--
..INSECTA				
..COLEOPTERA				
..ELMIDAE				
..DUBIRAPHIA			3	1
..OPTIOSERVUS	8	1	19	20
..OULIMNIUS	--	--	--	--
..STENELMIS	--	8	5	6
..DIPTERA				
..ATHERICIDAE=RHAGIONIDAE				
..ATHERIX		--	1	--
..CHIRONOMIDAE	2	12	--	--
..ABLABESMYIA	--	--	11	--
..CONICAPELOPIA	--	--	--	12
..CORYNONEURA	--	--	--	2
..CRICOTOPUS	--	--	--	10
..DIAMESA	--	--	--	--
..DIPLOLADIUS	--	--	--	--
..EUKIEFFERIELLA	--	--	8	12
..MICROTENDIPES	--	--	22	--
..ORTHOCLADIUS	--	--	8	2
..PARAMETIOCNEMUS	--	--	--	2
..POLYPEDILUM	--	--	--	--
..RHEOCRICOTOPUS	--	--	17	19
..RHEOTANTARUS	--	--	5	3
..HYENEMANNIELLA	--	--	--	--
..EMPIDIDAE				
..HEMERODROMIA	--	1	4	--
..SIMULIDAE				
..SIMULIUM	10	2	308	62
..TIPULIDAE				
..ANTOCHA	1	3	19	11
..EPHEMEROPTERA				
..BAETIDAE				
..BAETIS	1	1	1	2
..EPHEMERELLIDAE				
..EPHEMERELLA	--	4	7	7
..HEPTAGENIIDAE				
..STENONEMA	14	10	36	51
..LEPTOPHLEBIIDAE				
..LEPTOPHLEBIA	--	--	--	--
..PARALEPTOPHLEBIA	--	--	2	3
..SIPHONURIDAE				
..SIPHONURIA	2	--	--	1
..MEGALOPTERA				
..CORYDALIDAE				
..CHAULIODES	--	--	--	--
..CORILLUS	2	--	1	--
..NICOBIA	--	--	--	--
..PLECOPTERA				
..CAPNIIDAE				
..ALLOCAPIA	--	--	--	--
..PERLIDAE				
..NEOPHASGANOPHORA	--	1	--	--
..PARAGNETIS	7	2	5	--
..TAENIOPTERYGIDAE				
..TAENIOPTERYX	--	--	9	4
..TRICHOPTERA				
..BRACHYCENTRIDAE				
..BRACHYCENTRUS	--	--	--	--
..MICRASEMA	--	--	1	--
..GLOSSOSOMATIDAE				
..GLOSSOSOMA	--	3	6	3
..HYDROPSYCHIDAE				
..CHEUMATOPSYCHE	31	5	34	14
..HYDROPSYCHE	75	62	143	81
..SYMPTOPTSYCHE	--	--	--	--
..HYDROPTILIDAE				
..HYDROPTILA	2	--	--	--
..LEUCOTRICHIA	--	1	15	4
..STACTOBIELLA	--	--	5	--
..LIMNephilidae				
..APATANIA	--	--	--	1
..GOERA	--	--	--	--
..NEOPHYLAX	--	--	--	--
..MOLANIDAE				
..MOLANNA	--	--	--	--
..PHILOPOTAMIDAE				
..CHIMARRA	54	59	12	142
..POLYCENTROPIDAE				
..POLYCENTROPUS	--	--	7	--
..PSYCHOMYIIDAE				
..PSYCHOMYIA	--	--	6	--
..RHYACOPHILIDAE				
..RHYACOPHILA	--	--	1	--
MOLLUSCA (MOLLUSCS)				
..BIVALVIA				
..NUCULOIDAE				
..SPHAERIIDAE	--	--	--	1
..SPHAERIA				
..GASTROPODA				
..BASOMMATOPHORA				
..ANCYLIDAE	--	--	--	--
..FERRISSIA	--	--	--	--
NEMATODA (NEMATODES)				
..UNKNOWN CLASS				
..UNKNOWN ORDER				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	--	1
PLATYHELMINTHES (PLATWORMS)				
..TURBELLARIA				
..TRICLADIDA				
..PLANARIIDAE	4	15	--	--
..UNKNOWN GENUS	--	--	2	--
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	--	34

	01480648	EAST BRANCH BRANDYWINE CREEK NEAR CUPOLA, PA.			
DATE	OCT 25 77	NOV 2 78	NOV 7 79	NOV 7 80	
TIME	0830	1245	1800	1115	
TOTAL COUNT	583	318	186	824	
ORGANISM	COUNT	COUNT	COUNT	COUNT	
ANNELIDA					
..OLIGOCHAETA					
..UNKNOWN ORDER					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	--	--	
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	3	--	--	--	
..CRUSTACEA					
..ISOPODA					
..ASELLIDAE					
..ASELLUS	--	--	--	--	
..INSECTA					
..COLEOPTERA					
..ELMIDAE					
..DUBIRAPHIA		--	--	--	
..OPTIOSERVUS	36	4	3	24	
..OULIMNIUS		--	3	--	
..STENELMIS	3	2	5	--	
..DIPTERA					
..ATHENICIDAE=RHAGIONIDAE					
..ATINIKIX	--	--	--	--	
..CHIRONOMIDAE	--	--	--	--	
..ABLABEITYA	--	--	--	--	
..CONCHIAPELOPIA	9	2	--	12	
..CORYNONEURA	6	--	--	--	
..CRICOTOPUS	8	17	--	20	
..DIAMESA	--	9	--	--	
..DIPLOCLADIUS	--	--	1	--	
..EUKIEFFERIELLA	5	1	2	16	
..MICROENDIPES	2	--	--	4	
..OSTROCIIDUS	--	13	2	--	
..PARAMETRICNEMUS	--	--	--	8	
..POLYPEDILUM	--	--	--	--	
..RHEOCRICOTOPUS	--	2	--	--	
..RHEOCRYTARUS	23	--	3	28	
..THIENEMANNIELLA	1	--	--	--	
..EMPIDIDAE					
..HEMERODROMIA	1	--	--	8	
..SIMULIIDAE					
..SIMULIUM	17	104	2	--	
..TIPULIDAE					
..ANTOCIA	17	--	8	12	
..EPHEMEROPTERA					
..BAETIDAE					
..BAETIS	3	--	1	--	
..EPHEMERELLIDAE					
..EPHEMERELLA	43	--	7	16	
..HEPTAGENIIDAE					
..STENOMEA	30	4	4	24	
..LEPTOPHLEBIIDAE					
..LEPTOPHLEBIA	--	1	--	--	
..PARALEPTOPHLEBIA	--	--	--	--	
..SIPHONURIDAE					
..ISONYCHIA	1	--	--	--	
..MEGALOPTERA					
..CORYDALIDAE					
..CHAULIODES	--	--	--	8	
..CORYDALUS	--	1	--	--	
..NIGRONIA	--	--	1	--	
..PLECOPTERA					
..CAPNIDAE					
..ALLOCAPNIA	--	--	1	--	
..PERLIDAE					
..NEO PHASGANOPHORA	--	--	1	--	
..PARAGNETINA	--	2	--	8	
..TAENIOPTERYGIDAE					
..TAENIOPTERYX	8	--	8	--	
..TRICHOPTERA					
..BRACHYCENTRIDAE					
..BRACHYCENTRUS	--	8	--	4	
..MICRASOMA					
..GLOSSOSOMATIDAE					
..GLOSSOSOMA	7	--	3	12	
..HYDROPSYCHIDAE					
..CHEIMATOPSYCHE	47	48	12	180	
..HYDROPSYCHE	238	64	92	132	
..SYMPHITOPSYCHE	--	--	4	--	
..HYDROPTILIDAE					
..HYDROPTILA	1	--	--	8	
..LEUCOTRICHIA	2	--	--	52	
..STACTOBIELLA	--	--	--	--	
..LIMNETHILIDAE					
..APATANIA	--	--	--	--	
..GOERA	--	--	1	--	
..NEOPHYLAX	5	--	--	--	
..MOLANNIDAE					
..MOLANNA	--	8	--	--	
..PHILOPOTAMIDAE					
..CHIMARRA	74	28	2	56	
..POLYCENTROPIDIDAE					
..POLYCENTROPUS	--	--	--	--	
..PSYCHOMYIIDAE					
..PSYCHOMYIA	--	--	--	--	
..RHYACOPHILIDAE					
..RHYACOPHYLA	--	--	--	--	
MOLLUSCA (MOLLUSCS)					
..BIVALVIA					
..NUCULOIDEA					
..SPHAERIIDAE					
..SPHAERIUM	--	--	--	--	
..GASTROPODA					
..BASOMMATOPHORA					
..ANCYLIDAE					
..FERRISSIA	1	--	--	--	
NEMATODA (NEMATODES)					
..UNKNOWN CLASS					
..UNKNOWN ORDER					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	1	--	
PLATYHELMINTHES (PLATWORMS)					
..TURBELLARIA					
..TRICLADIDA					
..PLANARIIDAE	--	--	--	--	
..UNKNOWN GENUS	--	--	1	12	
..UNKNOWN FAMILY	--	--	--	--	
..UNKNOWN GENUS	--	--	--	--	

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

	01480853 EAST BR BRANDYWINE CR AT GLENMOORE, PA.			
DATE	OCT 11, 73	OCT 25, 74	OCT 20, 76	OCT 25, 77
TIME	0000	0000	1430	1130
TOTAL COUNT	134	113	424	120
ORGANISM	COUNT	COUNT	COUNT	COUNT
ANNELIDA				
..OLIGOCHAETA				
..UNKNOWN ORDER				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	4	--
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
..HYDRACARINA				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	4	12	--
..INSECTA				
..COLEOPTERA				
..ELMIDAE				
..OPTIOSERVUS	--	--	--	1
..OULIMNUS	--	--	1	--
..STENELMIS	--	1	1	--
..DIPTERA				
..ATHERICIDAE=RHAGIONIDAE				
..ATHERIA	--	1	--	--
..CHIRONOMIDAE	1	5	--	--
..CONCHAPELOPIA	--	--	3	1
..CRICOTOPUS	--	--	16	1
..EUKIEFFERIELLA	--	--	8	--
..LIMNOCHIRONOMUS	--	--	--	--
..NANOCLADUS	--	--	--	--
..NILOTANYPUS	--	--	--	--
..ORTHOCLADIUS	--	--	--	1
..PSECTROCLADIUS	--	--	--	2
..RHEOTANYTARSUS	--	--	57	4
..TANYTARSUS	--	--	--	--
..THIENMANNIELLA	--	--	4	--
..EMPIDIDAE				
..HEMERODROMIA	--	--	3	--
..SIMULIIDAE				
..SIMULIUM	1	4	2	--
..TIPULIDAE				
..ANTOCHA	2	11	34	1
..GONOMYIA	3	--	--	--
..TIPULA	1	--	--	--
..EPHEMEROPTERA				
..BAETIDAE				
..BAETIS	--	1	--	--
..PSEUDOCLOEON	--	--	3	--
..EPHEMERELLIDAE	--	1	2	--
..EPHEMERELLA	--	--	--	--
..HEPTAGENIIDAE				
..STENONEMA	3	2	31	7
..LEPIDOPTERA				
..PYRALIDIDAE				
..PARARGYACTIS	--	--	3	1
..MEGALOPTERA				
..CORYDALIDAE				
..CHAULIOIDES	--	1	--	--
..CORYDALUS	1	--	--	--
..NIGRONIA	--	--	--	--
..SIALIDAE				
..SIALIS	--	--	--	1
..ODONATA				
..AESHNIDAE				
..AESHNA	2	--	--	--
..PLECOPTERA				
..PERLIDAE				
..ACRONEURIA	1	--	--	--
..PARACETINA	17	3	--	--
..TAENIOPTERYGIDAE				
..TAENIOPTERYX	--	--	22	6
..TRICHOPTERA				
..BRACHYCENTRIDAE	--	--	--	--
..BRACHYCENTRUS	--	1	8	7
..MICRASEMA	--	--	--	--
..GLOSSOSOMATIDAE				
..GLOSSOSOMA	--	1	5	1
..HYDROPSYCHIDAE				
..CHEUMATOPSYCHE	28	12	66	48
..HYDROPSYCHE	57	63	107	28
..MACRONEMA	--	1	--	--
..SYMPHITOPSYCHE	--	--	--	--
..HYDROPTILIDAE				
..HYDROPTILA	--	--	--	--
..OCHROTRICHA	--	--	4	--
..LIMNephilidae				
..APATANIA	--	--	--	2
..PHILOPOTAMIDAE				
..CHIMARRA	16	--	4	1
..POLYCENTROPIDIDAE				
..CYRNEILLUS	--	--	--	--
..NYCTIOPHYLAX	--	--	1	1
..POLYCENTROPUS	--	1	3	5
..PSYCHOMYIIDAE				
..PSYCHOMYIA	--	--	4	--
MOLLUSCA (MOLLUSCS)				
..GASTROPODA				
..BASOMMATOPHORA				
..ANCYLIDAE				
..FERRISSIA	--	--	19	3
..PHYSIDAE				
..PHYSA	--	--	--	--
NEMATODA (NEMATODES)				
..UNKNOWN CLASSES				
..UNKNOWN ORDER				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	1	--
PLATYHELMINTHES (PLATWORMS)				
..TURBELLARIA				
..TRICLADIDA				
..PLANARIIDAE	1	--	--	--
..UNKNOWN GENUS	--	--	--	--

01480653

EAST BR BRANDYWINE CR AT GLENMOORE, PA.

DATE TIME	NOV 2 78 1015	NOV 8 79 0945	NOV 14 80 1330
TOTAL COUNT	152	305	444
ORGANISM	COUNT	COUNT	COUNT
ANNELIDA			
..OLIGOCHAETA			
...UNKNOWN ORDER			
...UNKNOWN FAMILY			
...UNKNOWN GENUS	--	--	--
ARTHROPODA (ARTHROPODS)			
..ARACHNIDA			
...HYDRACARINA			
...UNKNOWN FAMILY			
...UNKNOWN GENUS	--	2	--
..INSECTA			
...COLEOPTERA			
...ELMIDAE			
...OPTIOSERVUS	--	27	4
...OULIMNIUS	--	--	--
...STENELMIS	--	--	4
...DIPTERA			
...ATHERICIDAE-RHAGIONIDAE			
...ATHERIX	1	--	--
...CHIRONOMIDAE	--	--	--
...CONCHAPELOPIA	1	--	--
...CRICOTOPUS	--	--	16
...EUKIEFFERIELLA	--	11	--
...LIMNOCHIRONOMUS	--	--	4
...NANOCLADIUS	1	--	--
...NILOTANYUS	--	--	--
...ORTHOCLADIUS	--	44	8
...PSECTROCLADIUS	--	--	--
...RHEOTANYTARSUS	1	14	--
...TANYTARSUS	--	--	4
...THIENEMANNIELLA	--	--	--
...EMPTIIDAE			
...HEMERODROMIA	--	1	8
...SIMULIIDAE			
...SIMULIUM	--	--	--
...TIPULIDAE			
...ANTOCHA	7	31	16
...GONOMYIA	--	--	--
...TIPULA	--	--	4
...EPHEMEROPTERA			
...BAETIDAE			
...BAETIS	--	2	--
...PSEUDOCLOEON	--	--	--
...EPHEMERELLIDAE			
...EPHEMERELLA	--	--	--
...HEPTAGENIIDAE			
...STENONEMA	5	--	--
...LEPIDOPTERA			
...PRALIDAE			
...PARARGYACTIS	--	--	4
...MEGALOPTERA			
...CORYDALIDAE			
...CHAULIOIDES	--	--	4
...CORYDALUS			
...NIGRONIA	1	1	--
...SIALIDAE			
...SIALIS	--	--	--
...ODONATA			
...AESHNIDAE			
...AESHNA	--	--	--
...PLECOPTERA			
...PERLIDAE			
...ACRONEURIA	1	2	--
...ACRONEURIA	--	--	--
...PARAGNETINA	--	1	--
...TAENIOPTERIDAE			
...TAENIOPTERYX	3	2	16
...TRICHOPTERA			
...BRACHYCENTRIDAE			
...BRACHYCENTRUS	--	57	--
...MICRASMA	--	--	20
...GLOSSOSOMATIDAE			
...GLOSSOSOMA	--	--	--
...HYDROPSYCHIDAE			
...CHEUMATOPSYCHE	68	--	44
...HYDROPSYCHE	--	31	244
...MACRONEMA	--	--	--
...SYMPTITOPSYCHE	52	71	--
...HYDROPTILIDAE			
...HYDROPTILA	--	--	8
...OCHROTRICHIA	--	--	--
...LIMNNEPHILIDAE			
...APATANIA	--	--	--
...PHILOPODAMIDAE			
...CHIMARRA	3	8	4
...POLYCENTROPIDAE			
...CYRNELLUS	--	--	4
...NYCTIOPHYLAX	1	--	--
...POLYCENTROPUS	3	--	4
...PSYCHOMYIIDAE			
...PSYCHOMYIA	--	--	--
MOLLUSCA (MOLLUSCS)			
..GASTROPODA			
...BASOMMATOPHORA			
...ANCYLIDAE			
...PERRISSIA	2	--	16
...PHYSIDAE			
...PHYSA	1	--	--
NEMATODA (NEMATODES)			
..UNKNOWN CLASS			
...UNKNOWN ORDER			
...UNKNOWN FAMILY			
...UNKNOWN GENUS	--	--	--
PLATYHELMINTHES (FLATWORMS)			
..TURBELLARIA			
...TRICLADIDA			
...PLANARIIDAE	--	--	--
...UNKNOWN GENUS	--	--	8

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	01480856 INDIAN RUN NEAR SPRINGTON, PA.					
	OCT 25, 74 0000	NOV 10, 75 1330	OCT 20, 78 1515	OCT 25, 77 1230	NOV 8, 79 1045	NOV 7, 80 1315
TOTAL COUNT	188	448	135	42	185	822
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..PROSOPORA						
..LUMBRICULIDAE					1	
..UNKNOWN GENUS	--	--	--	--		--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	1	--	--	1	--
..CRUSTACEA						
..CYCLOPOIDA						
..CYCLOPIDAE	--	1	--	--	--	--
..CYCLOPS						
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
..OPTIOSERVUS	3	4	--	--	3	10
..OULIMYUS	--	--	--	--	2	1
..STENELMIS	--	--	--	--		--
..PSEPHENIDAE	--	--	1	--	--	1
..ECTOPUS	--	--	2	2	--	7
..PSEPHENUS	--	--				
..DIPTERA						
..ATHERICIDAE=RHAGIONIDAE						
..ATHERIX						
..A. V. ALEGATA	--	--	--	--	1	--
..CERATOPOGONIDAE=HELEIDAE						
..UNKNOWN GENUS	--	1	--	--	--	--
..CHIRONOMIDAE	8	--	--	--	--	--
..CARDIOCLADIUS	--	--	2	1	--	--
..CONCHAPELOPIA	--	--	--	--	2	9
..CRICOTOPUS	--	--	13	--	4	--
..DIAMES	--	7	--	--	--	1
..EUKIEFFERIELLA	--	--	--	1	1	1
..METRIOCNEMUS	--	10	--	--	--	28
..MICROTENDIPES	--	2	--	--	--	3
..NANOCLIDIUS	--	--	--	--	--	24
..ORTHOCCLADIUS	--	36	6	--	29	--
..PARAMETRIOCNEMUS	--	--	--	--	1	--
..POLYPTILUM	--	--	--	--	1	--
..PSECTROCLADIUS	--	--	--	--	--	--
..RHEOTANYTARSUS	--	12	10	--	7	28
..THIENEMANNIELLA	--	7	--	--	--	12
..SIMULIIDAE						
..SIMULIUM	2	12	12	--	2	--
..TIPULIDAE						
..TIPULIDAE	3	9	7	1	5	22
..ANTONIA						
..EPHEMEROPTERA						
..BAETIDAE						
..BAETIS	2	3	--	1	--	2
..PSEUDOCLOEON	--	--	--	--	--	--
..CAENIDAE						
..CAENIS	--	--	--	--	--	2
..EPHEMERELLIDAE						
..EPHEMERELLA	3	145	1	--	7	137
..EPHEMERIDAE						
..EPHEMERA	--	--	--	--	--	2
..HEPTAGENIIDAE						
..EPEORUS	--	--	--	--	4	--
..STENONEMA	12	42	3	4	4	80
..SIPHONURIDAE						
..ISONYCHIA	--	2	1	--	1	--
..PLECOPTERA						
..CAPNIDAE						
..PARACAPNIA	--	--	--	--	27	--
..UNKN GENUS	--	--	--	--	--	2
..PERLLIDAE						
..ACRONSURIA	2	--	--	--	5	--
..ACRONEURIA	--	--	--	--	--	--
..PARAGNETIA	1	--	--	1	1	--
..UNKNOWN GENUS	--	3	--	--	--	--
..PERLODIDAE						
..UNKNOWN GENUS	--	--	--	--	--	3
..TAENIOPTERYGIDAE						
..TAENIOPTERYX	--	--	--	--	6	--
..TRICHOPTERA						
..BRACHYCENTRIDAE						
..NICHISEMA	--	2	--	--	6	5
..GLOSSOSOMATIDAE						
..GLOSSOSOMA	18	11	3	1	14	8
..HYDROPSYCHIDAE	44	74	26	5	10	45
..CHEIMATOPSYCHE	83	28	6	4	2	--
..HYDROPSYCHE	--	--	--	3	--	--
..POTAMYIA	--	--	--	--	18	10
..SYMPHITOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE						
..HYDROPTILA	--	--	--	--	--	4
..LEUCOTRICHIA	1	1	--	--	--	--
..LEPTOCERIDAE						
..MYSTACIDAE	--	--	--	--	--	5
..LIMNephilidae						
..APATANIA	--	2	2	4	5	90
..GOELIA	1	1	1	1	1	13
..NEOPHYLAX	--	1	--	--	--	--
..PHILOPOTAMIDAE						
..CHIMARRA	2	8	--	2	2	--
..POLYCENTROPODIDAE	3	10	--	--	5	--
..NEURECLIPSIS	--	--	--	1	--	--
..NYCTOPHYLAX	1	5	1	--	--	7
..PHYLOCENTROPUS	--	--	--	--	--	7
..POLYCENTROPUS	1	1	--	--	1	--
..PSYCHOMYIIDAE	7	2	11	--	--	48
..PSYCHOMYIA						
..RHACOPHILIDAE						
..RHACOPHILA	4	1	2	--	5	--
MOLLUSCA (MOLLUSCS)						
..BIVALVIA						
..NUCULOIDEA						
..SPHARIIDAE						
..UNKNOWN GENUS	--	--	--	--	--	2
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDA						
..FERRISSIA	9	3	24	10	1	26
..PHYSIDAE	--	--	--	--	--	1
..PHYSA						
PLATYHELMINTHES (FLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	1	--	--	2

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

	01480700 EAST BR BRANDYWINE CR NR DOWNINGTOWN, PA.					
DATE	NOV 11, 70	MAY 25, 71	OCT 19, 71	OCT 2, 72	OCT 10, 73	OCT 29, 74
TIME	0000	0000	0000	0000	0000	0000
TOTAL COUNT	88	38	38	127	201	147
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..HIRUDINEA						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
..OLIGOCHAETA						
..UNKNOWN ORDER						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
..UNKNOWN GENUS	--	--	--	--	--	1
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
..OPTIOSERVUS	--	--	--	--	2	1
..OULIMNIS	--	--	--	--	--	--
..STENELMIS	--	--	--	--	--	--
..PSEPHENIDAE	--	--	--	--	--	--
..PSEPHENUS	--	--	--	--	--	--
..DIPTERA						
..CHIRONOMIDAE	--	--	--	37	4	12
..CARDIOCLADIUS	--	--	--	--	--	--
..CORYNONEURA	--	--	--	--	--	--
..CRICOTOPUS	--	--	--	--	--	--
..EUKIEFFERIELLA	--	--	--	--	--	--
..MICROTENDIPS	--	--	--	--	--	--
..ORTHOCLADIUS	--	--	--	--	--	--
..RHEOTANYTARSUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	--	--
..EMPIDIDAE	--	--	--	1	--	--
..HEMERODROMIA	--	--	--	--	--	--
..SIMULIIDAE	1	1	--	--	2	--
..SIMULIUM						
..TIPULIDAE	--	--	--	--	6	1
..ANTOCHA	--	--	--	--	--	--
..EPHEMEROPTERA						
..BAETIDAE	--	8	--	5	6	1
..PSEUDOCLOEON	--	--	--	1	--	--
..EPHEMERELLIDAE	--	--	--	--	--	--
..EPHEMERELLA	1	7	--	--	--	--
..HEPTAGENIIDAE	--	--	--	--	--	--
..STENONEMA	--	2	2	1	9	5
..SIPHONURIDAE	--	--	--	--	--	--
..ISONYCHIA	--	--	--	6	1	4
..LEPIDOPTERA						
..PYRALIIDAE	--	--	--	--	--	--
..PARARGYCTIS	--	--	--	--	--	--
..MEGALOPTERA						
..CORYDALIDAE	--	--	--	--	--	--
..CORYDALUS	1	--	--	--	--	--
..C. CORNUTUS	--	--	--	--	--	--
..NEUROPTERA						
..SISYRIDAE	--	--	--	--	--	--
..SISYRA	--	--	--	--	--	--
..PLECOPTERA						
..PERLIDAE	--	--	--	--	--	--
..ACRONEURIA	1	--	1	1	1	--
..PARAGNETINA	--	--	--	--	--	--
..TAENIOPTERYGIDAE	--	--	--	--	--	--
..TAENIOPTERYX	--	--	--	--	--	--
..TRICHOPTERA						
..BRACHYCENTRIDAE	--	--	--	--	--	--
..MICRASEMA	--	--	--	--	--	--
..HYDROPSYCHIDAE	--	--	--	--	--	--
..CHEUMATOPSYCHE	28	5	4	16	70	14
..HYDROPSYCHE	49	15	29	51	94	100
..MACRONEMA	--	--	2	1	2	1
..SYMPHITOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE	--	--	--	--	--	--
..HYDROPTILA	--	--	--	--	--	--
..LEUCOTRICHIA	--	--	--	3	--	--
..LEPTOCERIDAE	--	--	--	--	--	--
..MYSTACIDES	--	--	--	--	--	--
..LIMNIPHILIDAE	--	--	--	--	--	--
..APATANIA	--	--	--	--	--	--
..PHILOPOTAMIDAE	--	--	--	--	--	--
..CHIMARRA	--	--	--	2	3	1
..POLYCENTROPIDIDAE	--	--	--	--	--	--
..NEURECLIPSIS	--	--	--	1	--	--
..NYCTIOPHYLLA	--	--	--	--	--	--
..POLYCENTROPUS	--	--	--	--	--	2
..PSYCHOMYIIDAE	--	--	--	--	--	--
..PSYCHOMYIA	5	--	--	1	--	3
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE	--	--	--	--	--	1
..FERRISSIA	--	--	--	--	--	--





		01480700 EAST BR BRANDYWINE CR NR DOWNINGTOWN, PA.					
DATE	OCT 29, 75	OCT 18, 76	OCT 25, 77	OCT 30, 78	NOV 2, 79	NOV 14, 80	
TIME	1340	1830	1400	1130	0930	0845	
TOTAL COUNT	357	685	325	368	55	3840	
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT	
ANNELIDA							
..HIRUDINEA							
..UNKNOWN ORDER							
..UNKNOWN FAMILY							
..UNKNOWN GENUS	--	1	--	--	--	--	
..OLIGOCHAETA							
..UNKNOWN ORDER							
..UNKNOWN FAMILY							
..UNKNOWN GENUS	--	1	--	--	--	--	
ARTHROPODA (ARTHROPODS)							
..ARACHNIDA							
..HYDRACARINA							
..UNKNOWN FAMILY							
..UNKNOWN GENUS	4	4	3	--	--	64	
..INSECTA							
..COLEOPTERA							
..ELMIDAE							
..OPTIOSERVUS	9	9	2	8	--	--	
..OULIMNUS	--	3	--	--	--	--	
..STENELMIS	--	1	1	--	--	32	
..PSEPHENIDAE							
..PSEPHENUS	1	--	1	4	1	--	
..DIPTERA							
..CHIRONOMIDAE	--	--	--	--	--	--	
..CARDIOCLADIUS	6	--	--	1	--	32	
..CORYNONEURA	--	--	1	--	--	--	
..CRICOTOPUS	--	43	19	--	17	64	
..EUKTEPFERIELLA	--	15	--	--	--	--	
..MICROTENDIPES	3	--	--	--	--	32	
..ORTHOCLEIDIUS	--	5	--	4	--	--	
..RHOTANYTARSUS	13	53	5	12	1	1440	
..THIENEMANNIELLA	--	--	--	--	--	32	
..EMPIDIDAE	--	--	--	--	--	--	
..HEMERODROMIA	2	2	--	--	--	--	
..SIMULIIDAE	--	--	--	--	--	--	
..SIMULIUM	--	2	--	24	--	--	
..TIPULIDAE	--	--	--	--	--	--	
..ANTOCHA	3	8	8	--	--	32	
..EPHEMEROPTERA							
..BAETIDAE							
..BAETIS	--	--	--	--	--	--	
..PSEUDOCLOSON	1	2	3	--	1	--	
..EPHEMERELLIDAE							
..EPHEMERELLA	38	14	3	12	--	96	
..HEPTAGENIIDAE							
..STENONEMA	2	29	23	4	2	128	
..SIPHONURIDAE							
..ISONYCHIA	--	--	--	--	--	96	
..LEPIDOPTERA							
..PYRALIDIDAE							
..PARARGYACTIS	2	18	20	--	--	--	
..MEGALOPTERA							
..CORYDALIDAE							
..CORYDALUS	2	5	2	--	--	--	
..C. CORNUTUS	--	--	--	--	1	--	
..NEUROPTERA							
..SISTRIDAE							
..SISYRA	--	3	--	--	--	--	
..PLECOPTERA							
..PERLIDAE							
..ACRONEURIA	1	--	1	--	1	--	
..PARAGNETINA	6	2	--	--	--	128	
..TAENIOPTERYGIDAE							
..TAENIOPTERYX	1	6	16	--	--	192	
..TRICHOPTERA							
..BRACHYCENTRIDAE							
..MICRASEMA	--	--	1	--	--	224	
..HYDROPSYCHIDAE							
..CHEUMATOPSYCHE	127	177	48	--	2	192	
..HYDROPSYCHE	102	254	130	132	2	960	
..MACRONEMA	9	10	5	--	--	--	
..SYMPHITOPSYCHE	--	--	--	168	26	--	
..HYDROPTILIDAE							
..HYDROPTILA	--	--	--	--	--	32	
..LEUCOTRICHIA	1	1	3	--	--	--	
..LEPTOCERIDAE							
..MYSTACIDES	--	1	1	--	--	--	
..LIMNAPHILIDAE	--	1	2	--	--	--	
..APATANIA	--	--	--	--	--	--	
..PHILOPOTAMIDAE	--	--	--	--	--	--	
..CHIMARRA	--	4	--	--	--	--	
..POLYCENTROPIDAE							
..NEURECLIPSIS	--	--	--	--	--	--	
..NYCTIOPHILAX	--	--	2	--	--	--	
..POLYCENTROPUS	--	1	12	--	--	64	
..PSYCHOMYIIDAE							
..PSYCHOMYIA	13	11	8	--	1	--	
..GLOSSOSOMATIDAE							
..GLOSSOSOMA	4	3	--	--	--	--	
MOLLUSCA (MOLLUSCS)							
..GASTROPODA							
..BASOMMATOPHORA							
..ANCYLIDAE							
..FERRISSIA	2	1	5	--	--	--	

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	01480903 VALLEY CR AT MULLSTEINS MEADOWS NR DOWNINGTOWN, PA.				
	OCT 12 73 0000	OCT 29 74 0000	NOV 10 75 0800	OCT 21 76 1230	OCT 26 77 0930
TOTAL COUNT	770	949	997	630	433
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	--	--	--
..CRUSTACEA					
..AMPHIPODA					
..GAMMARIDAE					
..GAMMARUS	--	--	--	2	--
..INSECTA					
..COLEOPTERA					
..DIPLOIDAE					
..HELICUS	--	--	--	--	--
..ELMIDAE					
..OPTIOSERVUS	8	3	32	8	--
..STENELMIS	5	19	48	1	17
..PSEPHENIDAE					
..PSEPHENUS	--	--	--	--	1
..DIPTERA					
..CERATOPOGONIDAE-HELEIDAE					
..UNKNOWN GENUS	--	--	--	--	--
..CHIRONOMIDAE	18	15	--	--	--
..ABLABESMYIA	--	--	2	--	--
..CARDIOCHLADUS	--	--	52	--	4
..CONCHAELOPIA	--	--	--	4	--
..CORYNONEURA	--	--	--	1	--
..CRICOTOPUS	--	--	--	44	19
..EUKIEFFERIELLA	--	--	--	31	--
..MICROTENDIPES	--	--	--	--	--
..ORTHOCLEIDIUS	--	--	16	--	--
..POLYPEDILUM	--	--	--	11	--
..RHEOTANYTARSUS	--	--	3	28	--
..TANYTARSUS	--	--	--	8	1
..THIENEMANNIELLA	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	1
..EMPIDIDAE					
..HEMERODROMIA	--	--	4	--	--
..SIMULIIDAE					
..SIMULIUM	19	22	26	16	3
..TIPULIDAE					
..ANTOCHA	1	6	47	2	10
..TIPULA	--	--	--	1	--
..EPHEMEROPTERA					
..BAETIDAE					
..BAETIS	9	6	--	8	1
..CAENIDAE					
..CAENIS	--	--	--	--	6
..EPHEMERELLIDAE					
..EPHEMERELLA	8	5	165	23	--
..SERRATELLA	--	--	--	--	--
..HEPTAGENIIDAE					
..STENONEMA	25	19	10	68	13
..SIPHONURIDAE					
..ISONYCHIA	3	4	--	--	--
..TRICORYTHIDAE					
..TRICORYTHODES	1	--	--	1	--
..MEGALOPTERA					
..CORDYLIDAE					
..CORDYLUS	1	1	7	--	3
..NIGRONIA	1	--	--	--	--
..ODONATA					
..COENAGRIONIDAE					
..UNKNOWN GENUS	--	--	--	--	--
..PLECOPTERA					
..UNKNOWN FAMILY	--	--	--	2	--
..UNKNOWN GENUS	--	--	--	--	--
..CAPNIIDAE	--	--	--	--	--
..ALLOCAENIA	--	--	--	--	--
..PERLIDAE					
..(NEO)PHASGANOPHORA	--	1	--	5	--
..PARAGNETINA	--	--	3	--	--
..TRICHOPTERA					
..GLOSSOSOMATIDAE					
..GLOSSOSOMA	1	--	7	--	--
..HYDROPSYCHIDAE					
..CHEUMATOPSYCHE	182	294	170	61	81
..HYDROPSYCHE	487	547	395	274	228
..POTAMYIA	--	--	--	--	24
..SYMPHYTOPSYCHE	--	--	--	--	--
..HYDROTILIDAE					
..LEUCOTRICHIA	--	--	3	1	1
..LIMNephilidae	--	--	--	--	--
..APATANIA	--	--	--	--	--
..PHILOPOTAMIDAE					
..CHIMAREA	1	--	4	25	11
..WORMALDIA	--	--	--	3	--
..POLYCENTROPODIDAE					
..NEURECLIPSIS	--	--	--	--	7
..NYCTIOPHYLAX	--	--	1	--	--
..PSYCHOMYIDAE					
..PSYCHOMYIA	--	--	1	--	--
..RHYACOPHILIDAE					
..RHYACOPHILA	--	1	--	--	--
MOLLUSCA (MOLLUSCS)					
..BIVALVIA					
..NUCULOIDEA					
..SPHAERIIDAE					
..SPHAERIUM	--	--	--	--	1
..GASTROPODA					
..BASOMMATOPHORA					
..ANCYLIDAE					
..FERRISSIA	--	--	1	1	3
..PHYSIDAE	--	1	--	--	--
..PHYSA					
PLATYHELMINTHES (PLATWORMS)					
..TURBELLARIA					
..TRICLADIDA					
..PLANARIIDAE	--	5	--	--	--
..UNKNOWN FAMILY	--	--	--	1	--
..UNKNOWN GENUS	--	--	--	--	--

	01480903	VALLEY CR AT MULLSTEINS MEADOWS NR DOWNINGTOWN, PA.		
DATE	NOV 2 78	NOV 2 79	NOV 19 80	NOV 19 80
TIME	1515	1045	1300	1315
TOTAL COUNT	308	381	1596	954
ORGANISM	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)				
..ARACHNIDA				
..HYDRACARINA				
..UNKNOWN FAMILY				
..UNKNOWN GENUS	--	--	12	36
..CRUSTACEA				
..AMPHIPODA				
..GAMMARIDAE				
..GAMMARUS	--	--	--	--
..INSECTA				
..COLEOPTERA				
..DRYOPIDAE				
..HELICUS	1			
..ELMIDAE				
..OPTIOSERVUS	--	44	48	144
..STENELMIS	2	2	12	16
..PSEPHENIDAE				
..PSEPHENUS	--	--	--	21
..DIPTERA				
..CERATOPOGONIDAE=HELEIDAE				
..UNKNOWN GENUS	--	--	--	4
..CHIRONOMIDAE	--	--	--	--
..ABLABESMYIA	--	--	--	--
..CARDIOCLADIUS	--	--	--	--
..CONCHAPELOPIA	--	--	--	36
..CORYNONEURA	--	--	--	--
..CRICOTOPUS	20	13	48	--
..EUKIEFFERIELLA	5	9	48	4
..MICROTENDIPES	--	--	24	104
..ORTHOCLADIUS	23	27	72	12
..POLYPEDILUM	1	--	--	--
..RHOTANTYARSUS	8	4	132	16
..TANYTARSUS	--	--	12	--
..THIENEMANNIELLA	--	--	--	--
..UNKNOWN GENUS	--	--	--	--
..EMPIDIDAE	--	--	--	--
..HEMERODROMIA	--	--	--	--
..SIMULIDAE				
..SIMULIUM	27	5	48	--
..TIPULIDAE				
..ANTOCHA	2	13	24	32
..TIPULA	--	--	--	1
..EPHEMEROPTERA				
..BAETIDAE				
..BAETIS	1	22	144	--
..CAENIDAE				
..CAENIS	--	--	--	--
..EPHEMERELLIDAE	--	--	--	--
..EPHEMERELLA	--	21	--	--
..SERRATEA	--	--	--	168
..HEPTAGENIDAE				
..STENONEMA	6	12	72	16
..SIPHONURIDAE				
..ISONCHIA	--	--	--	--
..TRICORYTHIDAE	--	--	--	--
..TRICORYTHODES	--	--	--	--
..MEGALOPTERA				
..CORYDALIDAE	--	10	--	1
..CORYDALUS	--	--	--	--
..NIGRONIA	--	--	--	--
..ODONATA				
..COENAGRIONIDAE				
..UNKNOWN GENUS	--	--	--	1
..PLECOPTERA				
..UNKNOWN FAMILY	--	--	--	--
..UNKNOWN GENUS	--	--	--	--
..CAPNIIDAE				
..ALLOCAPNIA	--	--	--	4
..PERLIDAE				
..(NEO)PHASGANOPHORA	--	3	--	8
..PARAENETINA	1	--	--	--
..TRICHOPTERA				
..GLOSSOSOMATIDAE				
..GLOSSOSOMA	--	--	--	--
..HYDROPSYCHIDAE	11	55	444	100
..CHEUMATOPSYCHE	121	77	240	16
..HYDROPSYCHE	--	--	--	--
..POTAMYIA	--	--	--	--
..SYMPHITOPSYCHE	81	43	--	152
..HYDROPTILIDAE	--	--	120	8
..LEUCOTRICHIA	--	--	--	--
..LIMNephilidae	--	--	--	--
..APATANIA	--	--	--	4
..PHILOPOTAMIDAE	--	21	96	44
..CHIMARRA	--	--	--	--
..WORMALDIA	--	--	--	--
..POLYCENTROPODIDAE	--	--	--	--
..NEURECLIPSIS	--	--	--	--
..NYCTIOPHYLAX	--	--	--	--
..PSYCHOMYIIDAE	--	--	--	--
..PSYCHOMYIA	--	--	--	--
..RHYACOPHILIDAE	--	--	--	--
..RHYACOPHILA	--	--	--	--
MOLLUSCA (MOLLUSCS)				
..BIVALVIA				
..NUCULOIDEA				
..SPHAERIIDAE				
..SPHAERIUM	--	--	--	--
..GASTROPODA				
..BASOMMATOPHORA				
..ANCYLIDAE	--	--	--	--
..FERISSIA	--	--	--	--
..PHYSIDAE	--	--	--	--
..PHYSA	--	--	--	--
PLATYHELMINTHES (FLATWORMS)				
..TURBELLARIA				
..TRICLADIDA				
..PLANARIIDAE	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--
..UNKNOWN GENUS	--	--	--	8

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

	01481030		BRANDYWINE CREEK NEAR CHADDS FORD, PA		
DATE	MAY 25 71	OCT 2 72	OCT 10 73	OCT 30 74	OCT 30 75
TIME	0000	0000	0000	0000	1130
TOTAL COUNT	41	133	653	248	717
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	--	--	6
..CRUSTACEA					
..AMPHIPODA					
..GAMMARIDAE					
..GAMMARUS	--	--	--	--	1
..INSECTA					
..COLEOPTERA					
..ELMIDAE					
..DUBIRAPHIA	--	--	--	1	--
..OPTIOSERVUS	--	--	--	--	1
..DIPTERA					
..ATHERICIDAE=RHAGIONIDAE					
..ATHERIX	--	--	--	--	--
..CHIRONOMIDAE		12		5	--
..CARDIOCLADIUS	--	--	--	--	--
..CONCHAELOPIA	--	--	--	--	3
..CRICOTOPUS	--	--	--	--	--
..LIMNOCHIRONOMUS	--	--	--	--	--
..ORTHOCLADIUS	--	--	--	--	--
..PARAMETRICNEMUS	--	--	--	--	1
..PLECOPTERACOLUTHUS	--	--	--	--	--
..POLYPEDILUM	--	--	--	--	--
..PSEPTOCLEIDIUS	--	--	--	--	9
..RHEOTANYTARSUS	--	--	--	--	--
..SIMULIIDAE					
..SIMULIUM	11	3	--	--	1
..TIPULIDAE	--	--	--	--	1
..ANTOCHA	--	--	--	--	--
..EPHEMEROPTERA					
..BAETIDAE					
..BAETIS	--	1	3	1	1
..CAENIDAE					
..CAENIS	--	--	--	--	--
..EPHEMERELLIDAE					
..EPHEMERELLA	7	--	--	--	4
..HEPTAGENIIDAE		7	11	1	87
..STENONEMA	8	--	--	--	--
..SIPHONURIDAE		--	2	--	--
..SONYCHIA	--	--	--	--	--
..SIPHONURUS	--	--	--	--	--
..LEPIDOPTERA					
..PYRALIDIDAE		8	4	--	5
..PARARGYACTIS	--	--	--	--	--
..MEGALOPTERA					
..CORDALIDAE					
..NIGRONIA	--	--	--	--	--
..SIALIDAE	--	--	--	--	--
..SIALIS	--	--	--	--	--
..ODONATA					
..COENAGRIONIDAE					
..ARGIA	--	--	--	--	--
..PLECOPTERA					
..PERLIDAE					
..PARAGNETINA	--	--	--	--	--
..TAENIOPTERYGIDAE	--	--	--	--	--
..TAENIOPTERYX	--	--	--	--	--
..TRICHOPTERA					
..BRACHYCENTRIDAE					
..BRACHYCENTRUS	--	--	--	--	--
..GLOSSOSOMATIDAE					
..GLOSSOSOMA	--	--	--	--	--
..HYDROPSYCHIDAE					
..CHEUMATOPSYCHE	--	27	405	142	382
..HYDROPSYCHE	15	78	208	55	221
..POTAMYIA	--	--	--	--	--
..SYMPHITOPSYCHE	--	--	--	--	--
..HYDROPTILIDAE					
..LEUCOTRICHIA	--	1	2	1	2
..LEPTOCERIDAE	--	--	--	1	--
..OECETIS	--	--	--	--	--
..PHILOPOTAMIDAE					
..CHITARRA	--	--	--	--	--
..POLYCENTROPODIDAE					
..CYRNELLUS	--	--	2	--	8
..POLYCENTROPUS	--	--	--	--	--
..RHYACOPHILIDAE	--	--	--	--	--
..RHYACOPHILA	--	--	--	--	--
MOLLUSCA (MOLLUSCS)					
..BIVALVIA					
..NUCULOIDEA					
..CORBICULIDAE					
..CORBICULA	--	--	--	--	--
..SPHAERIIDAE	--	--	13	--	--
..SPHAERIUM	--	--	--	7	1
..GASTROPODA					
..BASOMMATOPHORA					
..ANCYLIDAE					
..FERRISSIA	--	--	4	--	5
..PHYSIDAE	--	--	1	--	--
..PHYSA	--	--	--	--	--
PLATYHELMINTHES (FLATWORMS)					
..TURBELLARIA					
..TRICLADIDA					
..PLANARIIDAE	--	--	--	32	--
..UNKNOWN GENUS	--	--	--	--	--
..UNKNOWN FAMILY	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--

	01481030		BRANDYWINE CREEK NEAR CHADDS FORD, PA		
DATE	OCT 19, 78	OCT 27, 77	NOV 3, 78	NOV 5, 79	NOV 12, 80
TIME	1345	1330	1430	1330	1545
TOTAL COUNT	460	103	183	132	549
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	--	1	--	--	--
..CRUSTACEA					
..AMPHIPODA					
...CAMMARIDAE	--	--	--	--	--
...GAMMARUS					
..INSECTA					
..COLEOPTERA					
...ELMIDAE					
...DUBIRAPHIA	--	--	--	--	--
...OPTIOSERVUS	--	--	2	1	8
..DIPTERA					
...ATHERICIDAE=RHAGIONIDAE					
...ATHERIX	--	--	--	1	--
...CHIRONOMIDAE	--	--	--	--	--
...CARDIOCLADIUS	--	1	4	--	--
...CONCHAPELOPIA	--	--	--	--	9
...CRICOTOPUS	24	10	--	3	88
...LIMNOCHIRONOMUS	--	--	--	--	24
...ORTHOCCLADIUS	--	--	2	8	--
...PARAMETRICCNEMUS	--	--	--	1	--
...PLECOPTERACOLUTHUS	--	--	--	--	--
...POLYPEDILUM	--	--	--	1	12
...PSECTROCLADIUS	4	--	--	--	--
...RHEOTANYTARSUS	18	1	--	7	32
..SIMULIIDAE					
...SIMULIUM	3	--	1	7	--
..TIPULIDAE					
...ANTOCHA	--	1	--	--	4
..EPHEMEROPTERA					
..BAETIDAE					
...BAETIS	--	1	--	2	--
...CAENIDAE	--	1	--	--	--
...CAENIS	--	--	--	--	--
...EPHEMERELLIDAE	--	--	--	10	--
...EPHEMERELLA	--	--	--	--	--
...HEPTAGENIIDAE	--	--	--	--	--
...STENONEMA	20	7	8	10	58
..SIPHONURIDAE					
...ISONYCHIA	--	--	1	1	--
...SIPHONURUS	--	1	--	--	--
..LEPIDOPTERA					
...PYRALIDAE					
...PARARGYACTIS	8	3	1	--	32
..MEGALOPTERA					
..CORYDALIDAE					
...NIGRONIA	--	--	--	2	--
...SIALIDAE	--	1	--	--	--
...SIALIS	--	--	--	--	--
..ODONATA					
...COENAGRIONIDAE	--	1	--	--	--
...ARGIA	--	--	--	--	--
..PLECOPTERA					
...PERLIDAE	--	--	--	4	--
...PARAGNETINA	--	--	--	--	--
...TAENIOPTERYGIDAE	--	--	--	--	--
...TAENIOPTERYX	--	--	--	22	--
..TRICHOPTERA					
...BRACHYCENTRIDAE	--	--	--	2	--
...BRACHYCENTRUS	--	--	--	--	--
...GLOSSOSOMATIDAE	--	--	--	1	--
...GLOSSOSOMA	--	--	--	--	--
...HYDROPSYCHIDAE	227	44	83	3	18
...CHEUMATOPSYCHE	124	17	81	7	180
...HYDROPSYCHE	--	6	--	--	--
...POTAMYIA	--	--	--	29	--
...SYMPHITOPSYCHE	--	--	--	--	--
...HYDROPTILIDAE	--	--	--	--	--
...LEUCOTRICHIA	8	4	--	--	38
...LEPTOCERIDAE	--	--	--	--	--
...OECETIS	--	--	--	--	--
...PHILOPOTAMIDAE	--	--	--	9	--
...CHIMARRA	--	--	--	--	--
...POLYCENTROPODIDAE	--	--	--	--	--
...CYRNELLUS	--	--	--	--	4
...POLYCENTROPUS	7	--	--	--	--
...RHYACOPHILIDAE	--	--	--	1	--
...RHYACOPHILA	--	--	--	--	--
MOLLUSCA (MOLLUSCS)					
..BIVALVIA					
...NUCULOIDAE					
...CORBICULIDAE	--	--	2	--	--
...CORBICULA	--	--	--	--	--
...SPHAERIIDAE	15	--	--	--	--
...SPHAERIUM					
..GASTROPODA					
...BASOMMATOPHORA					
...ANCYLIDAE					
...FERRISSIA	4	3	--	--	--
...PHYSIDAE	1	--	--	--	--
...PHYSA					
PLATYHELMINTHES (FLATWORMS)					
..TURBELLARIA					
...TRICLADIDAE					
...PLANARIIDAE	--	--	--	--	68
...UNKNOWN GENUS	--	--	--	--	--
...UNKNOWN FAMILY	1	--	--	--	--
...UNKNOWN GENUS					

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	01494900 E BR BIG ELK CREEK AT ELKVIEW, PA					
	JUN 3 70 0000	NOV 3 70 0000	MAY 24 71 0000	OCT 18 71 0000	OCT 23 72 0000	OCT 9 73 0000
TOTAL COUNT	184	89	80	6	325	43
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHEATA						
..PLESIOPORA						
..NAIDIDAE						
...KNOWN GENUS	--	--	--	--	--	--
...UNKNOWN ORDER						
...UNKNOWN FAMILY						
...UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
...UNKNOWN FAMILY						
...UNKNOWN GENUS	--	--	--	--	--	--
..INSECTA						
..COLEOPTERA						
...DRYOPIDAE	--	--	--	--	--	--
...HELICUS						
..ELMIDAE						
...OPTIOSERVUS	--	--	--	--	1	--
...OULIMNIUS	--	--	--	--	--	--
...STENELMIS	--	--	--	--	--	--
..HYDROPHILIDAE						
...BEROSUS	--	--	--	--	--	--
...PSEPHENIDAE	--	--	--	--	--	--
...PSEPHENUS	--	--	--	--	--	--
..DIPTERA						
...CHIRONOMIDAE	88	89	--	--	174	1
...CARDIOLADIUS	--	--	--	--	--	--
...CONCHAELOPIA	--	--	--	--	--	--
...CRICOTOPUS	--	--	--	--	--	--
...DIAMESA	--	--	--	--	--	--
...EUKIEFFERIELLA	--	--	--	--	--	--
...MICROPSECTRA	--	--	--	--	--	--
...MICROTENTIPES	--	--	--	--	--	--
...ORTHOCLEIDIUS	--	--	--	--	--	--
...PARAMETRIOCNEMUS	--	--	--	--	--	--
...PARATANYTARSUS	--	--	--	--	--	--
...POLYPEDILUM	--	--	--	--	--	--
...PSECIROCLADIUS	--	--	--	--	--	--
...RHEOTANYTARSUS	--	--	--	--	--	--
...THIENEMANNIELLA	--	--	--	--	--	--
..EMPIDIDAE						
...HEMERODROMIA	--	--	--	--	--	--
...UNKNOWN GENUS	--	--	--	--	--	--
..SIMULIIDAE						
...SIMULIUM	15	--	54	--	1	--
..TIPULIDAE						
...ANTOCHA	--	--	--	--	15	4
..EPHEMEROPTERA						
...BAETIDAE						
...BAETIS	17	--	--	--	1	--
...PSEUDOCLOSON	--	--	--	--	1	--
..EPHEMERELLIDAE						
...EPHEMERELLA	--	--	8	--	--	--
...EURYLOPHELLA	--	--	--	--	--	--
...SERRATELLA	--	--	--	--	--	--
..HEPTAGENIIDAE						
...EPEORUS	1	--	--	--	--	--
...STENONEMA	--	--	--	2	22	8
..SIPHONURIDAE						
...AMELETUS	1	--	--	--	--	--
...ISONYCHIA	--	--	--	--	3	1
..TRICHOPTERA						
...GLOSSOSOMATIDAE						
...GLOSSOSOMA	--	--	--	--	--	--
..HYDROPSYCHIDAE						
...CHEUMATOPSYCHE	--	--	--	2	13	12
...HYDROPSYCHE	82	--	20	2	84	19
...SYMPHITOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE						
...HYDROPTILA	--	--	--	--	4	--
...LEUCOTRICHIA	--	--	--	--	--	--
...OCHROTRICHIA	--	--	--	--	--	--
..PHILOPOTAMIDAE						
...CHIMARRA	--	--	--	--	--	--
...DOLOPHILODES	--	--	--	--	1	--
..POLYCENTROPIDAE						
...POLYCENTROPUS	--	--	--	--	1	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
...BASOMMATOPHORA						
...ANCYLIDAE	--	--	--	--	--	--
...FERRISSIA	--	--	--	--	--	--
...PHYSIDAE	--	--	--	--	--	--
...PHYSA	--	--	--	--	--	--
PLATYHELMINTHES (PLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
...PLANARIIDAE	--	--	--	--	--	--
...UNKNOWN GENUS	--	--	--	--	--	--
...UNKNOWN FAMILY	--	--	--	--	--	--
...UNKNOWN GENUS	--	--	--	--	--	--

DATE TIME	01494900 E BR BIG ELK CREEK AT ELKVIEW, PA				
	NOV 1, 78 1230	NOV 2, 77 1200	OCT 25, 78 1500	NOV 6, 79 1500	NOV 20, 80 0830
TOTAL COUNT	199	1005	179	37	972
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA					
..OLIGOCHAETA					
..PLESIOPORA					
..NAIDIDAE					
..UNKNOWN GENUS	--	--	9	--	--
..UNKNOWN ORDER					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	1	--	--	--
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	2	20	8	--	--
..INSECTA					
..COLEOPTERA					
..DRYOPIDAE					
..HELICUS	1	--	--	--	--
..ELMIDAE					
..OPTIOSERVUS	7	8	--	2	32
..OULIMNUS	2	--	1	--	--
..STENELMIS	1	13	--	--	--
..HYDROPHILIDAE					
..BEROSUS	--	--	--	1	--
..PSEPHENIDAE					
..PSEPHENUS	3	3	1	--	4
..DIPTERA					
..CHIRONOMIDAE	--	--	--	--	--
..CARDIOCLADIUS	--	--	1	--	--
..CONCHAPELOPIA	5	45	6	3	58
..CRICOTOPUS	23	22	19	--	12
..DIAMESA	--	--	--	--	4
..EUKIEPFERIELLA	--	18	--	--	--
..MICROPSPECTRA	1	--	1	--	--
..MICROTENDIPES	--	5	1	7	68
..ORTHOCCLADIUS	--	--	--	2	4
..PARAMETRIOCNEMUS	--	--	--	--	4
..PARATANYTARSUS	--	--	--	--	--
..POLYPEDILUM	--	23	1	--	--
..PSECTROCLADIUS	2	--	--	--	--
..RHOTANYTARSUS	44	131	25	--	188
..THIENEMANNIELLA	4	1	--	1	--
..EMPIDIDAE	--	--	--	--	--
..HEMERODROMIA	1	5	--	--	--
..UNKNOWN GENUS	--	--	--	--	4
..SIMULIIDAE					
..SIMULIUM	3	5	--	--	8
..TIPULIDAE					
..ANTOCHA	4	5	4	7	108
..EPHEMEROPTERA					
..BAETIDAE					
..BAETIS	--	--	--	--	--
..PSEUDOCLOSON	1	--	--	--	--
..EPHEMERELLIDAE					
..EPHEMERELLA	1	14	2	--	--
..EURYLOPHELLA	--	--	--	--	4
..SERRATELLA	--	--	--	--	20
..HEPTAGENIIDAE					
..SPEORUS	--	--	--	--	--
..STENONEMA	2	13	--	1	52
..SIPHONURIDAE					
..AMELETUS	--	--	--	--	--
..ISONYCHIA	--	11	2	--	--
..TRICHOPTERA					
..GLOSSOSOMATIDAE					
..GLOSSOSOMA	--	--	--	--	4
..HYDROPSYCHIDAE					
..CHEUMATOPSYCHE	24	288	28	3	108
..HYDROPSYCHE	23	240	22	--	24
..SYMPTITOPSYCHE	--	--	35	--	72
..HYDROPTILIDAE					
..HYDROPTILA	--	8	3	--	20
..LEUCOTRICHIA	--	1	--	--	44
..OCHROTRICHIA	1	--	--	--	--
..PHILOPOTAMIDAE					
..CHIMARRA	4	141	2	1	88
..DOLOPHILODES	--	--	--	--	--
..POLYCENTROPIDAE					
..POLYCENTROPUS	--	--	--	--	--
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
..BASOMMATOPHORA					
..ANCYLIDAE					
..FERRISSIA	40	8	8	2	12
..PHYSIDAE					
..PHYSA	--	--	1	--	--
PLATYHELMINTHES (FLATWORMS)					
..TURBELLARIA					
..TRICLADIDA					
..PLANARIIDAE					
..UNKNOWN GENUS	--	--	1	--	--
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	--	--	24

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	NOV 3 70	MAY 24 71	OCT 18 71	OCT 23 72	OCT 9 73
	0000	0000	0000	0000	0000
TOTAL COUNT	104	41	15	921	441
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA					
..OLIGOCHAETA					
..PLESIOPORA					
..TUBIFICIDAE					
..UNKNOWN GENUS	--	--	--	--	--
..UNKNOWN ORDER					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	--	--	--
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	--	--	--
..INSECTA					
..COLEOPTERA					
..DYTISCIDAE					
..HYGROTUS					
..ELMIDAE					
..OPTIOSERVUS					
..OULIMNIUS					
..STENELMIS				1	
..DIPTERA					
..CHIRONOMIDAE	30	15	--	122	9
..CARDIOCLADIUS	--	--	--	--	--
..CONCHAPELOPIA	--	--	--	--	--
..CRICOTOPUS	--	--	--	--	--
..DIAMESA	--	--	--	--	--
..EUKIEFFERIELLA	--	--	--	--	--
..MICROTENDIPES	--	--	--	--	--
..ORTHOCLEIDIUS	--	--	--	--	--
..PARAMETRICNEMUS	--	--	--	--	--
..POLYPEDILUM	--	--	--	--	--
..PSECTROCLADIUS	--	--	--	--	--
..RHEOTANYTARSUS	--	--	--	--	--
..TANYTARSUS	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	--
..EMPIDIDAE					
..HEMERODROMIA	--	--	--	--	--
..UNKNOWN GENUS	--	--	--	--	--
..SIMULIIDAE					
..SIMULIUM	--	--	--	--	--
..TIPULIDAE					
..ANTOCHA	--	--	--	46	12
..DICRANOTA	--	--	--	1	--
..HELIUS	--	--	--	--	--
..EPHEMEROPTERA					
..BAETIDAE					
..BAETIS	--	--	--	5	2
..PSEUDOCLOEON	--	--	--	3	--
..CAENIDAE					
..CAENIS	--	--	--	--	--
..EPHEMERELLIDAE					
..EPHEMERELLA	27	3	1	1	--
..SERRATELLA	--	--	--	--	--
..HEPTAGENIIDAE					
..STENONEMA	13	5	2	58	5
..SIPHONURIDAE					
..ISONYCHIA	--	--	--	39	1
..MEGALOPTERA					
..CORYDALIDAE					
..CORYDALUS	--	--	--	1	1
..C. CORNUTUS	--	--	--	--	--
..ODONATA					
..COENAGRIONIDAE	--	--	--	1	--
..ARGIA	--	--	--	--	--
..PLECOPTERA					
..PERLODIDAE					
..UNKNOWN GENUS	--	--	--	--	--
..TAENIOPTERYGIDAE					
..TAENIOPTERYX	--	--	--	--	--
..TRICHOPTERA					
..GLOSSOSOMATIDAE					
..GLOSSOSOMA	--	--	--	--	--
..HYDROPSYCHIDAE					
..PNEUMATOPSYCHE			5	104	71
..HYDROPSYCHE	34	18	7	517	320
..MACRONEMA	--	--	--	14	12
..SYMPHYTOPSYCHE	--	--	--	--	--
..HYDROPTILIDAE					
..HYDROPTILA	--	--	--	3	--
..LEUCOTRICHIA	--	--	--	4	7
..OCHROTRICHIA	--	--	--	--	--
..LIMNEPHILIDAE					
..APATANIA	--	--	--	--	--
..PHILOPOTAMIDAE					
..CHIMARRA	--	--	--	--	--
..POLYCENTROPIDAE					
..NEURECLIPSIS	--	--	--	--	--
..POLYCENTROPUS	--	--	--	--	1
..RHYACOPHILIDAE					
..RHYACOPHILA	--	--	--	1	--
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
..BASOMMATOPHORA					
..ANCYLIDAE	--	--	--	--	--
..FERRISSIA					
PLATYHELMINTHES (FLATWORMS)					
..TURBELLARIA					
..TRICLADIDA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	--	--	--



01494950 W BR BIG ELK CREEK NEAR OXFORD, PA					
DATE	NOV 1, 78	NOV 2, 77	OCT 25, 78	NOV 20, 80	NOV 20, 80
TIME	1110	1230	1415	1000	1015
TOTAL COUNT	256	758	186	1304	2908
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA					
..OLIGOCHAETA					
..PLESIOPORA					
..TUBIFICIDAE					
..UNKNOWN GENUS	3	--	--	--	--
..UNKNOWN ORDER					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	--	20	16
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	5	--	8	--
..INSECTA					
..COLEOPTERA					
..DYTISCIDAE					
..HYGROTUS	1	--	--	--	--
..ELMIDAE					
..OPTIOSERVUS	5	24	1	4	8
..OULIMNIUS	--	1	--	--	4
..STENELMIS	--	8	1	--	12
..DIPTERA					
..CHIRONOMIDAE	--	--	--	--	--
..CARDIOCLADIUS	--	--	1	4	--
..CONCHAELOPIA	5	15	--	44	144
..CRICOTOPUS	18	--	7	--	--
..DIAMESA	--	--	--	4	--
..EUKIEFFERIELLA	8	--	2	12	8
..MICROTENDIPES	--	1	--	--	120
..ORTHOCALDIUS	--	31	2	64	32
..PARAMETRICNEMUS	--	--	--	8	8
..POLYPEDILUM	--	2	--	4	48
..PSECTROCLADIUS	--	4	--	438	712
..RHEOTANYTARSUS	15	42	7	--	4
..TANYTARSUS	--	--	--	8	8
..THIENEMANNIELLA	5	--	--	--	--
..EMPTIIDAE					
..HEMERODROMIA	1	4	2	--	--
..UNKNOWN GENUS	--	--	--	--	12
..SIMULIIDAE					
..SIMULIUM	8	6	--	--	--
..TIPULIDAE					
..ANTOCHA	10	48	9	168	96
..DICRANOTA	--	--	--	--	12
..HELIUS					
..EPHEMEROPTERA					
..BAETIDAE					
..BAETIS	1	--	--	--	--
..PSEUDOCLOSON	--	1	1	--	--
..CAENIDAE					
..CAENIS	1	--	--	--	--
..EPHEMERELLIDAE					
..EPHEMERELLA	2	18	--	--	--
..SERRATELLA	--	--	--	76	340
..HEPTAGENIIDAE					
..STENONEMA	11	40	2	12	28
..SIPHONURIDAE					
..ISONYCHIA	--	4	--	--	--
..MEGALOPTERA					
..CORYDALIDAE					
..CORYDALUS	1	3	--	--	--
..C.CORNUTUS	--	--	1	--	--
..ODONATA					
..COENAGRIONIDAE	--	--	--	--	--
..ARGIA	1	--	--	--	--
..PLECOPTERA					
..PERLOIDAE					
..UNKNOWN GENUS	--	--	--	--	4
..TAENIOPTERYGIDAE					
..TAENIOPTERYX	--	--	--	--	4
..TRICHOPTERA					
..GLOSSOSOMATIDAE					
..GLOSSOSOMA	--	1	--	--	--
..HYDROPSYCHIDAE					
..CHEUMATOPSYCHE	32	104	38	148	980
..HYDROPSYCHE	112	312	32	40	20
..MACRONEMA	1	3	--	--	4
..SYMPHITOPSYCHE	--	--	76	136	204
..HYDROPTILIDAE					
..HYDROPTILA	--	--	--	24	38
..LEUCOTRICHIA	5	42	1	72	--
..OCHROTRICHIA	2	--	--	--	--
..LIMNIPHILIDAE					
..APATANIA	--	--	--	--	4
..PHILOPOTAMIDAE					
..CHIMARRA	1	39	--	4	4
..POLYCENTROPIDAE					
..NEURECLIPSIS	--	--	--	--	20
..POLYCENTROPUS	--	--	--	4	--
..RHYACOPHILIDAE					
..RHYACOPHILA	--	--	--	--	--
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
..BASOMMATOPHORA					
..ANCILIDAE					
..PERRISSIA	--	--	2	4	--
PLATYHELMINTHES (FLATWORMS)					
..TURBELLARIA					
..TRICLADIDA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	1	--	--	--	16

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	01578340 EAST BRANCH OCTORARO CREEK AT CHRISTIANA, PA.				
	JUN 8, 70 0000	NOV 3, 70 0000	MAY 24, 71 0000	OCT 18, 71 0000	OCT 23, 72 0000
TOTAL COUNT	48	76	49	63	705
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	--	--	--	--	--
CRUSTACEA					
..ISOPODA					
...ASELLIDAE	--	--	--	--	--
...ASELLUS					
INSECTA					
..COLEOPTERA					
...ELMIDAE	--	--	--	--	--
...MICROCERYLLOEPUS	--	--	--	--	--
...OPTIOSERVUS	--	--	--	--	2
...STENELMIS	--	--	--	--	--
...PSEPHENIDAE	--	--	--	--	--
...PSEPHENUS	--	--	--	--	--
DIPTERA					
..CHIRONOMIDAE	8	9	18	--	122
...BRILLIA	--	--	--	--	--
...CONCHAELOPIA	--	--	--	--	--
...CRICOTOPUS	--	--	--	--	--
...EUKIEFFERIELLA	--	--	--	--	--
...LIMNOCHIRONOMUS	--	--	--	--	--
...MICROTENDIPES	--	--	--	--	--
...ORTHOCLADIUS	--	--	--	--	--
...PARACHIRONOMUS	--	--	--	--	--
...PARAMETRICNEMUS	--	--	--	--	--
...POLYPEDILUM	--	--	--	--	--
...PSEUDODIAMESA	--	--	--	--	--
...RHEOTANYTARSUS	--	--	--	--	--
...THIENEMANNIELLA	--	--	--	--	1
..EMPIDIDAE	--	--	--	--	1
..HEMERODROMIA	--	--	--	--	--
..SIMULIIDAE	4	--	13	--	--
...SIMULIUM					
..TIPULIDAE	--	--	--	--	17
..ANTOCHA					
EPHEMEROPTERA					
..BAETIDAE	8	--	3	--	1
...BAETIS					
...PSEUDOCLOEON	--	--	--	--	--
..EPHEMERELLIDAE	--	32	7	1	--
...EPHEMERELLA					
..HEPTAGENIIDAE	--	13	--	33	29
...STENONEMA					
..SIPHONURIDAE	--	--	--	--	1
...ISONYCHIA					
ODONATA					
..COENAGRIONIDAE	--	--	--	--	--
...ARGIA					
PLECOPTERA					
..TAeniopterygidae	--	--	--	--	--
...TAENIOPTERYX					
TRICHOPTERA					
..GLOSSOSOMATIDAE	--	--	--	--	1
...GLOSSOSOMA					
..HYDROPSYCHIDAE	--	--	--	13	193
...CHEUMATOPSYCHE	--	--	--	15	278
..HYDROPSYCHE	28	22	8	--	--
...SYMPHITOPSYCHE					
..HYDROPTILIDAE	--	--	--	--	1
...HYDROPTILA					
..LEUCOTRICHIA	--	--	--	--	3
..PHILOPOTAMIDAE	--	--	--	--	56
...CHIMARRA					
..RHYACOPHILIDAE	--	--	--	1	--
...RHYACOPHILA					
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
...BASOMMATOPHORA					
...ANCYLIDAE	--	--	--	--	--
...FERRISSIA					
PLATYHELMINTHES (FLATWORMS)					
..TURBELLARIA					
..TRICLADIDA	--	--	--	--	--
...PLANARIIDAE					

DATE TIME	01578340		EAST BRANCH OCTORARO CREEK AT CHRISTIANA, PA.		
	OCT 9 73 0000	OCT 30 74 0000	NOV 2 77 0830	NOV 7 79 1230	NOV 3 80 1530
TOTAL COUNT	385	172	1125	141	478
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
...HYDRACARINA					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	--	--	2	--	--
..CRUSTACEA					
...ISOPODA					
...ASELLIDAE					
...ASELLUS	--	--	1	4	4
..INSECTA					
...COLEOPTERA					
...ELMIDAE					
...MICROCYLLOEPUS	--	--	1	--	--
...OPTIOSERVUS	--	--	3	--	--
...STENELMIS	8	1	4	4	12
...PSEPHENIDAE	--	--	2	--	--
...PSEPHENUS	--	--			
..DIPTERA					
...CHIRONOMIDAE	5	9	--	--	--
...BRILLIA	--	--	1	--	--
...CONCHAPELOPIA	--	--	34	--	4
...CRICOTOPUS	--	--	93	--	48
...EUKIEFFERIELLA	--	--	1	--	--
...LUNNOCHIRONOMUS	--	--	--	--	4
...MICROTENDIPES	--	--	--	--	4
...ORTHOCLADIUS	--	--	--	--	8
...PARACHIRONOMUS	--	--	1	--	--
...PARAMETRIOCNEMUS	--	--	21	--	4
...POLYPEDILUM	--	--	2	--	--
...PSEUDODIAMESA	--	--	25	--	68
...RHEOTANYTARSUS	--	--	1	--	--
...THIENEMANNIELLA	--	--	--	--	--
...EMPIDIDAE	--	--	1	--	12
...HEMERODROMIA	--	--			
...SIMULIDAE	1	1	7	--	--
...SIMULIUM					
...TIPULIDAE	2	3	28	--	16
...ANTOCHA					
..EPHEMEROPTERA					
...BAETIDAE					
...BAETIS	2	--	--	--	--
...PSEUDOCLOEON	--	--	2	1	--
...EPHEMERELLIDAE	--	--	9	--	--
...EPHEMERELLA	--	--			
...HEPTAGENIIDAE	7	1	7	--	--
...STENONEMA					
...SIPHONURIDAE	5	8	2	--	--
...ISONYCHIA					
..ODONATA					
...COENAGRIONIDAE	--	--	1	--	--
...ARGIA					
..PLECOPTERA					
...TAENIOPTERYGIDAE	--	--	4	--	--
...TAENIOPTERYX					
..TRICHOPTERA					
...GLOSSOSOMATIDAE	--	--	--	--	--
...GLOSSOSOMA					
...HYDROPSYCHIDAE	98	49	484	76	44
...CHEUMATOPSYCHE	231	47	336	20	104
...HYDROPSYCHE			--	32	--
...SYMPHITOPSYCHE					
...HYDROPTILIDAE	--	--	5	--	24
...HYDROPTILA					
...LEUCOTRICHIA	11	--	26	--	96
...PHILOPOTAMIDAE					
...CHIMARRA	9	43	20	4	20
...RHYACOPHILIDAE	--	--	--	--	--
...RHYACOPHILA					
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
...BASOMMATOPHORA					
...ANCYLIDAE	--	4	1	--	4
...FERRISSIA					
PLATYHELMINTHES (FLATWORMS)					
..TURBELLARIA					
...TRICLADIDA	6	6	--	--	--
...PLANARIIDAE					

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	01578343 VALLEY CREEK NEAR ATGLEN, PA.				
	NOV 3, 70 0000	MAY 24, 71 0000	OCT 18, 71 0000	OCT 23, 72 0000	OCT 9, 73 0000
TOTAL COUNT	77	50	5	334	136
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ARTHROPODA (ARTHROPODS)					
..CRUSTACEA					
..ISOPODA					
...ASELLIDAE					
...ASELLUS	--	--	--	--	--
..INSECTA					
...COLEOPTERA					
...DRYOPTIDAE					
...HELICHUS	--	--	--	1	--
...ELMIDAE					
...OPTIOSERVUS	--	--	--	2	--
...STENELMIIS					
...PSEPHENIDAE	--	--	--	--	--
...PSEPHENUS					
...COLLEMBOLA					
...UNKNOWN FAMILY					
...UNKNOWN GENUS	--	--	--	--	--
..DIPTERA					
...CRIRONOMIDAE	18	11	--	24	1
...CONCHAPELOPIA	--	--	--	--	--
...CRICOTOPUS	--	--	--	--	--
...EUKIEFFERIELLA	--	--	--	--	--
...MICROTENDIPES	--	--	--	--	--
...NANOCLADIUS	--	--	--	--	--
...ORTHOCLADIUS	--	--	--	--	--
...POLYPEDILUM	--	--	--	--	--
...RHEOTANTYTARSUS	--	--	--	--	--
...THIENEMANNIELLA	--	--	--	1	--
..EMPIDIDAE	--	--	--	--	--
..HEMERODOMIA					
...SIMULIIDAE	--	15	--	7	5
...TIPULIDAE	--	--	--	1	--
...ANTOCHA	--	--	--	1	--
...HEXATOMA					
..EPHEMEROPTERA					
...BAETIDAE					
...BAETIS	10	8	--	8	1
...PSEUDOCLOEON	--	--	--	2	--
...EPHEMERELLIDAE					
...EPHEMERELLA	27	9	--	--	--
...HEPTAGENIIDAE					
...STENONEMA	6	--	3	38	1
...SIPHONURIDAE					
...ISONYCHIA	--	--	--	30	26
..MEGALOPTERA					
...CORDALIDAE	--	--	--	--	--
...CORDALUS					
..TRICHOPTERA					
...GLOSSOSOMATIDAE					
...GLOSSOSOMA	--	--	--	4	--
...HYDROPSYCHIDAE					
...CHEUMATOPSYCHE	--	--	--	78	24
...HYDROPSYCHE	16	7	2	137	78
...SYMPHITOPSYCHE	--	--	--	--	--
...HYDROPTILIDAE					
...LEUCOTRICHIA	--	--	--	--	--
...PHILOPOTAMIDAE	--	--	--	--	--
...CHIMARRA	--	--	--	--	--
...POLYCENTROPIDAE					
...CYRNELLUS	--	--	--	--	--
...POLYCENTROPUS	--	--	--	--	--
...PSYCHOMYIIDAE	--	--	--	--	--
...PSYCHOMYIA					
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
...BASOMMATOPHORA					
...ANCYLIDAE					
...FERRISSIA	--	--	--	--	--

	01578343	VALLEY CREEK NEAR ATGLEN, PA.			
DATE	OCT 30, 74	NOV 2, 77	NOV 7, 79	NOV 13, 80	
TIME	0000	0900	1400	1415	
TOTAL COUNT	130	768	13	1288	
ORGANISM	COUNT	COUNT	COUNT	COUNT	
ARTHROPODA (ARTHROPODS)					
..CRUSTACEA					
..ISOPODA					
....ASELLIDAE					
....ASELLUS	1	--	--	--	
..INSECTA					
..COLEOPTERA					
....DRYOPTIDAE					
....HELICUS	--	--	--	--	
....ELMIDAE					
....OPTIOSERVUS	--	6	--	--	
....STENELMIS	2	23	--	--	
....PSEPHENIDAE					
....PSEPHENUS	--	--	1	--	
..COLLEMBOLA					
....UNKNOWN FAMILY					
....UNKNOWN GENUS	--	--	--	8	
..DIPTERA					
....CHIRONOMIDAE	16	--	--	--	
....CONCHAELOPIA		15	--	16	
....CRICOTOPUS	--	41	--	192	
....EUKIEFFERIELLA	--	--	--	8	
....MICROTENDIPES	--	1	--	--	
....NANOCLADIUS	--	--	--	8	
....ORTHOCCLADIUS	--	17	--	40	
....POLYPEDILUM	--	7	--	--	
....RHEOTANTARSUS	--	32	--	32	
....THIENEMANNIELLA	--	5	--	--	
....EMPIDIDAE	--	--	--	--	
....HEMERODROMIA	--	2	--	--	
....SIMULIIDAE					
....SIMULIUM	2	19	--	88	
....TIPULIDAE					
....ANTOCHA	2	45	2	32	
....HEXATOMA	--	--	--	--	
..EPHEMEROPTERA					
....BAETIDAE					
....BAETIS	--	--	--	--	
....PSEUDOCLOEON	--	9	--	--	
....EPHEMERELLIDAE					
....EPHEMERELLA	--	5	--	--	
....HEPTAGENIIDAE					
....STENONEMA	--	29	--	24	
....SIPHONURIDAE					
....ISONYCHIA	--	6	--	8	
..MEGALOPTERA					
....CORYDALIDAE					
....CORYDALUS	--	--	--	8	
..TRICHOPTERA					
....GLOSSOSOMATIDAE					
....GLOSSOSOMA	--	7	--	--	
....HYDROPSYCHIDAE					
....CHEUMATOPSYCHE	12	234	1	80	
....HYDROPSYCHE	95	150	7	568	
....SYMPHYTOPSYCHE	--	--	--	--	
....HYDROPTILIDAE					
....LEUCOTRICHIA	--	9	--	160	
....PHILOPOTAMIDAE					
....CHIMARRA	--	29	--	8	
....POLYCENTROPIDIDAE					
....CYRNELLUS	--	--	--	8	
....POLYCENTROPUS	--	2	--	--	
....PSYCHOMYIIDAE					
....PSYCHOMYIA	--	53	1	--	
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
....BASOMMATOPHORA					
....ANCYLIDAE					
....FERRISSIA	--	22	--	--	

Table 3.--Benthic-invertebrate data--Continued  
[double dash indicates organism not present in sample]

DATE TIME	01578345 EAST BRANCH OCTORARO CREEK AT STEELVILLE, PA.					
	JUN 8 70 0000	NOV 3 70 0000	MAY 24 71 0000	OCT 18 71 0000	OCT 23 72 0000	OCT 9 73 0000
TOTAL COUNT	27	102	66	43	858	138
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA						
..OLIGOCHAETA						
..PLESIOPORA						
..TUBIFICIDAE						
...UNKNOWN GENUS	--	--	--	--	--	--
ARTHROPODA (ARTHROPODS)						
..ARACHNIDA						
..HYDRACARINA						
..UNKNOWN FAMILY						
...UNKNOWN GENUS	--	--	--	--	--	--
..CRUSTACEA						
..ISOPODA						
..ASELLIDAE						
..ASELLUS	--	--	--	--	--	--
..INSECTA						
..COLEOPTERA						
..ELMIDAE						
..STENELMIS	--	--	--	--	--	--
..PSEPHENIDAE						
..PSEPHENUS	--	--	--	--	--	--
..DIPTERA						
..CHIRONOMIDAE	2	--	--	--	587	1
..CARDIOLADIUS	--	--	--	--	--	--
..CONCHAFETPIA	--	--	--	--	--	--
..CORYNONEURA	--	--	--	--	--	--
..CRICOTOPUS	--	--	--	--	--	--
..EUKIEFFERIELLA	--	--	--	--	--	--
..MICROTENDIPES	--	--	--	--	--	--
..PARAMETRIOCNEMUS	--	--	--	--	--	--
..POLYPEDILUM	--	--	--	--	--	--
..RHEOTANYTARSUS	--	--	--	--	--	--
..THIENEMANNIELLA	--	--	--	--	--	--
..EMPIDIDAE					6	
..SIMULIIDAE	--	--	18	--	9	--
..SIMULIUM						
..TIPULIDAE						
..ANTOCHA	--	--	--	--	7	--
..EPHEMEROPTERA			11	--	--	--
..BAETIDAE						
..BAETIS	2	10	--	--	1	--
..PSEUDOCLOEON	--	--	--	--	1	--
..EPHEMERELLIDAE						
..EPHEMERELLA	--	52	--	3	2	--
..HEPTAGENIIDAE						
..HEPTAGENIA	2	--	--	--	--	--
..STENOENEMA	4	6	21	12	114	8
..SIPHONURIDAE						
..ISONYCHIA	--	--	--	--	19	28
..MEGALOPTERA						
..CORYDALIDAE						
..CORYDALUS	--	--	--	--	1	--
..NIGRONIA	--	--	--	--	--	1
..SIALIDAE						
..SIALIS	--	--	--	--	--	--
..PLECOPTERA						
..CAPNIIDAE						
..ALLOCAPNIA	--	--	--	--	--	--
..PERLODIPAE						
..UNKNOWN GENUS	--	--	--	--	--	--
..TAENIOPTERYGIDAE						
..TAENIOPTERYX	--	--	--	--	--	--
..TRICHOPTERA						
..BRACHYCENTRIDAE						
..MICRASEMA	--	--	--	--	1	--
..HYDROPSYCHIDAE						
..CHEUMATOPSYCHE	--	--	--	16	45	21
..DIPLECTRONA	--	--	--	--	--	--
..HYDROPSYCHE	17	23	16	12	63	79
..SYMPHITOPSYCHE	--	--	--	--	--	--
..HYDROPTILIDAE						
..HYDROPTILA	--	--	--	--	--	--
..LEUCOTRICHIA					2	--
..PHILOPOTAMIDAE						
..CHIMARUA	--	--	--	--	--	--
..PSYCHOMYIIDAE						
..PSYCHOMYIA	--	11	--	--	--	--
..RHYACOPHILIDAE						
..RHYACOPHILA	--	--	--	--	--	--
MOLLUSCA (MOLLUSCS)						
..GASTROPODA						
..BASOMMATOPHORA						
..ANCYLIDAE	--	--	--	--	--	--
...FERRISSIA						
PLATYHELMINTHES (PLATWORMS)						
..TURBELLARIA						
..TRICLADIDA						
..PLANARIIDAE						
...UNKNOWN GENUS	--	--	--	--	--	--

01578345 EAST BRANCH OCTORARO CREEK AT STEELVILLE, PA.					
DATE	OCT 30 74	NOV 1 78	NOV 2 77	NOV 7 79	NOV 13 80
TIME	0000	1345	1030	1430	1300
TOTAL COUNT	140	182	1174	79	1048
ORGANISM	COUNT	COUNT	COUNT	COUNT	COUNT
ANNELIDA					
..OLIGOCHAETA					
..PLESIOPORA					
..TUBIFICIDAE					
..UNKNOWN GENUS	--	1	--	--	--
ARTHROPODA (ARTHROPODS)					
..ARACHNIDA					
..HYDRACARINA					
..UNKNOWN FAMILY					
..UNKNOWN GENUS	--	--	10	--	--
..CRUSTACEA					
..ISOPODA					
..ASELLIDAE					
..ASELLUS	1	2	--	--	--
..INSECTA					
..COLEOPTERA					
..ELMIDAE					
..STENELMIS	--	1	5	--	--
..PSEPHENIDAE					
..PSEPHENUS	1	--	1	--	--
..DIPTERA					
..CHIRONOMIDAE	8	--	--	--	--
..CARDIOLADIUS	--	--	--	--	40
..CORCHAELOPIA	--	--	42	--	24
..CORYNONEURA	--	2	--	--	--
..CRICOTOPUS	--	11	94	--	128
..EUKIEFFERIELLA	--	5	43	--	58
..MICROTENDIPES	--	13	7	1	16
..PARAMETROCNEMUS	--	--	--	--	8
..POLYPEDILUM	--	10	201	1	8
..RHEOTANYTARSUS	--	21	243	1	40
..THIENEMANNIELLA	--	8	9	--	8
..EMPIDIDAE					
..SIMULIIDAE					
..SIMULIUM	--	5	--	--	--
..TIPULIDAE					
..ANTOCHA	1	8	16	--	72
..EPHEMEROPTERA	--	--	--	--	--
..BAETIDAE					
..BAETIS	2	--	--	--	8
..PSEUDOCLOSON	--	1	--	--	--
..EPHEMERELLIDAE					
..EPHEMERELLA	2	14	65	1	40
..HEPTAGENIIDAE	--	--	--	--	--
..HEPTAGENIA	8	19	82	15	80
..STENONEMA					
..SIPHONURIDAE					
..ISONYCHIA	13	--	8	--	--
..MEGALOPTERA					
..CORDALIDAE	--	--	1	--	--
..CORYDALUS	--	--	1	1	--
..NIGRONIA	--	--			
..SIALIDAE	--	--	1	--	--
..SIALIS					
..PLECOPTERA					
..CAPNIDAE					
..ALLOCANIA	--	--	--	1	--
..PERLODIDAE					
..UNKNOWN GENUS	--	--	3	--	--
..TAENIOPTERYGIDAE					
..TAENIOPTERYX	--	1	3	--	--
..TRICHOPTERA					
..BRACHYCENTRIDAE					
..MICRASEMA	--	--	--	--	--
..HYDROPSYCHIDAE					
..CHEIMATOPSYCHE	44	8	20	11	80
..DIPLECTRONA	--	--	--	2	--
..HYDROPSYCHE	55	34	208	6	240
..SYMPHITOPSYCHE	--	--	--	38	--
..HYDROPTILIDAE					
..HYDROPTILA	--	--	--	--	8
..LEUCOTRICHIA	--	--	--	--	64
..PHILOPOTAMIDAE					
..CHIMARRA	6	18	109	3	128
..PSYCHOMYIIDAE					
..PSYCHOMYIA	--	--	--	--	--
..RHYNACOPHILIDAE					
..RHYNACOPHILA	1	--	--	--	--
MOLLUSCA (MOLLUSCS)					
..GASTROPODA					
..BASOMMATOPHORA					
..ANCYLIDAE					
..FERRISSIA	--	--	4	--	--
PLATYHELMINTHES (FLATWORMS)					
..TURBELLARIA					
..TRICLADIDA					
..PLANARIIDAE					
..UNKNOWN GENUS	--	--	--	--	8

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity,  
and relative evenness  
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H <sub>max</sub> )	Minimum diversity (H <sub>min</sub> )	Evenness (E)
Site 1 (station 01472170) Pickering Creek near Eagle						
1970	161	5	2.10	2.27	0.18	0.92
1971	37	4	1.71	1.88	.42	.89
1972	743	14	1.58	3.74	.17	.40
1973	173	6	.87	2.62	.21	.27
1974	-	-	-	-	-	-
1975	-	-	-	-	-	-
1976	820	23	2.60	4.52	.26	.55
1977	1121	22	2.49	4.49	.19	.54
1979	94	11	2.56	3.37	.69	.70
1980	242	16	2.76	3.84	.49	.68
Site 2 (station 01472174) Pickering Creek near Chester Springs						
1970	84	7	2.07	2.60	.45	.75
1971	29	4	1.72	1.85	.50	.90
1972	413	17	2.29	4.01	.34	.53
1973	629	20	1.01	4.28	.28	.18
1974	173	13	1.89	3.58	.51	.45
1975	-	-	-	-	-	-
1976	531	35	3.34	4.97	.58	.63
1977	190	17	3.07	3.89	.63	.75
1979	83	19	3.19	3.94	1.35	.71
1980	132	7	2.13	2.85	.32	.72
Site 3 (station 014721854) Pickering Creek at Merlin						
1970	79	10	2.60	3.36	.71	.71
1971	71	7	2.30	2.62	.52	.85
1972	119	24	3.26	4.57	1.31	.60
1973	560	21	1.87	4.38	.33	.38
1974	128	14	2.37	3.57	.70	.58
1975	-	-	-	-	-	-
1976	1660	27	2.09	4.74	.17	.42
1977	547	23	2.27	4.53	.36	.46
1979	47	13	2.62	3.48	1.37	.59
1980	1334	28	2.14	4.80	.21	.42



Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity, and relative evenness--Continued  
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H <sub>max</sub> )	Minimum diversity (H <sub>min</sub> )	Evenness (E)
Site 4 (station 014721844) Pickering Creek at Charlestown Road at Charlestown						
1970	-	-	-	-	-	-
1971	-	-	-	-	-	-
1972	483	16	2.16	3.92	0.28	0.52
1973	103	9	1.07	3.08	.52	.21
1974	415	17	2.27	4.03	.33	.52
1975	-	-	-	-	-	-
1976	740	26	2.34	4.66	.32	.47
1977	862	22	2.29	4.39	.24	.49
1979	232	19	2.22	4.08	.61	.47
1980	2864	22	3.13	4.43	.08	.70
Site 5 (station 01472190) Pickering Creek near Phoenixville						
1970	127	10	2.34	3.31	.49	.65
1971	7	2	.73	1.02	.40	.54
1972	241	17	2.82	3.93	.52	.68
1973	156	11	1.76	3.31	.46	.46
1974	-	-	-	-	-	-
1975	375	17	2.80	3.95	.36	.68
1976	906	29	2.41	4.78	.30	.47
1977	316	23	2.78	4.51	.57	.56
1979	85	12	2.10	3.28	.82	.52
1980	520	20	3.56	4.19	.33	.84
Site 6 (station 01472109) Stony Run near Spring City						
1970	124	2	.79	.97	.06	.81
1971	30	2	.79	.91	.16	.85
1972	508	12	1.58	3.54	.19	.41
1973	391	6	.85	2.55	.11	.31
1974	177	8	1.72	2.89	.29	.55
1975	-	-	-	-	-	-
1976	285	23	2.97	4.40	.63	.62
1977	34	8	1.74	2.68	1.02	.43
1979	132	11	2.20	3.24	.53	.62
1980	272	15	2.05	3.77	.41	.49

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity, and relative evenness--continued  
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity ( $H_{\max}$ )	Minimum diversity ( $H_{\min}$ )	Evenness (E)
Site 7 (station 01472110) Stony Run at Spring City						
1970	93	6	1.50	2.55	0.35	0.52
1971	47	3	.80	1.63	.24	.41
1972	109	11	2.44	3.50	.62	.63
1973	13	2	.48	1.04	.28	.26
1974	146	19	3.59	4.18	.88	.82
1975	-	-	-	-	-	-
1976	495	21	3.17	4.36	.36	.70
1977	200	24	3.17	4.39	.87	.65
1979	124	11	2.05	3.31	.56	.54
1980	850	29	3.54	4.79	.32	.72
Site 8 (station 01472054) Pigeon Creek near Bucktown						
1970	94	6	2.23	2.59	.35	.84
1971	26	4	1.65	1.94	.54	.79
1972	288	15	2.39	3.79	.40	.59
1973	486	20	2.32	4.24	.35	.51
1974	-	-	-	-	-	-
1975	-	-	-	-	-	-
1976	554	21	2.97	4.33	.33	.66
1977	125	12	1.83	3.47	1.61	.43
1979	117	14	2.67	3.64	.75	.66
1980	440	9	1.83	3.20	.16	.55
Site 9 (station 01472065) Pigeon Creek at Porters Mill						
1970	132	7	2.41	2.85	.32	.83
1971	37	4	1.51	1.88	.42	.75
1972	125	9	2.16	3.22	.44	.62
1973	361	15	1.99	3.78	.33	.48
1974	131	11	1.65	3.51	.53	.38
1975	-	-	-	-	-	-
1976	579	21	2.51	4.37	.32	.54
1977	42	7	2.11	2.46	.76	.79
1979	290	21	2.63	4.40	.56	.54
1980	254	11	2.75	3.34	.31	.80

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity, and relative evenness--Continued  
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H <sub>max</sub> )	Minimum diversity (H <sub>min</sub> )	Evenness (E)
Site 10 (station 01472080) Pigeon Creek near Parker Ford						
1970	104	8	2.45	2.80	0.45	0.85
1971	24	4	1.50	1.71	.57	.81
1972	548	15	1.88	3.89	.23	.45
1973	-	-	-	-	-	-
1974	-	-	-	-	-	-
1975	767	19	2.90	4.21	.22	.67
1976	880	26	2.62	4.72	.28	.53
1977	344	27	2.87	4.74	.63	.55
1979	32	10	2.15	2.87	1.35	.53
1980	620	19	3.19	4.24	.27	.74
Site 11 (station 01472129) French Creek near Knauertown						
1970	-	-	-	-	-	-
1971	-	-	-	-	-	-
1972	64	11	2.68	3.44	.92	.70
1973	343	16	1.75	3.94	.37	.39
1974	166	18	2.85	3.96	.75	.65
1975	-	-	-	-	-	-
1976	136	15	2.70	3.64	.72	.68
1977	491	27	2.97	4.62	.47	.60
1979	151	18	3.12	4.00	.81	.72
1980	1088	21	2.90	4.41	.19	.64
Site 12 (station 01472140) South Branch French Creek at Coventryville						
1970	118	7	2.32	2.86	.35	.79
1971	36	7	2.17	2.49	.84	.81
1972	1053	19	2.69	4.22	.17	.62
1973	288	20	2.00	4.22	.54	.40
1974	271	20	3.06	4.26	.56	.68
1975	-	-	-	-	-	-
1976	972	28	2.88	4.81	.28	.57
1977	942	22	2.61	4.48	.22	.56
1979	137	16	2.71	3.90	.77	.62
1980	1499	27	2.94	4.74	.18	.61

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity,  
and relative evenness--Continued  
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H <sub>max</sub> )	Minimum diversity (H <sub>min</sub> )	Evenness (E)
Site 13 (station 01472138) French Creek near Coventryville						
1970	58	8	2.30	2.79	0.70	0.77
1971	23	5	1.80	2.24	.77	.70
1972	272	23	2.89	4.53	.65	.58
1973	101	14	2.21	3.56	.85	.50
1974	31	8	2.30	2.97	1.08	.64
1975	-	-	-	-	-	-
1976	160	18	3.12	4.19	.77	.69
1977	380	22	3.27	4.34	.47	.72
1979	163	29	3.80	4.71	1.24	.74
1980	694	21	3.31	4.29	.27	.76
Site 14 (station 01472154) French Creek near Pughtown						
1970	58	8	2.23	2.79	.70	.73
1971	34	6	1.88	2.54	.74	.63
1972	643	27	3.00	4.77	.38	.60
1973	225	15	1.73	3.71	.48	.39
1974	189	16	2.79	4.01	.60	.64
1975	-	-	-	-	-	-
1976	362	27	2.91	4.65	.61	.57
1977	747	27	3.04	4.74	.33	.61
1979	96	16	2.44	3.61	1.01	.55
1980	615	26	3.37	4.68	.38	.70
Site 15 (station 01472157) French Creek near Phoenixville						
1970	56	7	2.20	2.53	.62	.83
1971	24	6	1.64	2.15	.93	.58
1972	324	19	3.05	4.08	.46	.72
1973	96	11	1.86	3.44	.68	.43
1974	85	14	2.58	3.46	.96	.65
1975	232	21	3.02	4.15	.67	.67
1976	277	22	2.70	4.40	.61	.55
1977	645	31	3.34	4.96	.43	.64
1979	174	10	1.86	3.25	.38	.51
1980	629	27	3.60	4.67	.38	.75

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity,  
and relative evenness--Continued  
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H <sub>max</sub> )	Minimum diversity (H <sub>min</sub> )	Evenness (E)
Site 17 (station 01475300) Darby Creek at Waterloo Mills near Devon						
1970	46	3	1.20	1.54	0.24	0.74
1971	8	3	1.02	1.54	.73	.36
1972	155	10	1.98	3.27	.42	.55
1973	-	-	-	-	-	-
1974	239	11	2.11	3.47	.33	.57
1975	690	15	2.36	3.83	.19	.60
1976	473	21	2.99	4.35	.37	.66
1977	555	18	2.75	4.19	.28	.63
1979	362	18	2.87	4.04	.40	.68
1980	468	15	2.90	3.83	.26	.74
Site 18 (station 01475830) Crum Creek near Paoli						
1970	125	8	2.08	2.99	.39	.65
1971	28	4	1.59	1.74	.51	.87
1972	129	11	2.18	3.45	.54	.56
1973	132	12	1.97	3.34	.58	.50
1974	-	-	-	-	-	-
1975	-	-	-	-	-	-
1976	212	23	3.55	4.31	.79	.78
1977	221	25	3.08	4.64	.84	.59
1979	22	9	2.14	2.77	1.53	.49
1980	46	13	2.61	3.44	1.39	.59
Site 19 (station 01475840) Crum Creek at Whitehorse						
1970	88	9	1.87	3.18	.58	.50
1971	45	6	1.90	2.50	.60	.68
1972	219	8	1.64	2.95	.25	.51
1973	120	17	2.66	3.76	.91	.61
1974	67	14	2.55	3.73	1.15	.54
1975	-	-	-	-	-	-
1976	363	25	3.16	4.57	.56	.65
1977	835	27	2.85	4.79	.30	.57
1979	131	12	2.72	3.63	.59	.70
1980	417	16	3.16	3.88	.31	.80

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity, and relative evenness--Continued  
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity ( $H_{\max}$ )	Minimum diversity ( $H_{\min}$ )	Evenness (E)
Site 20 (station 01476430) Ridley Creek at Goshenville						
1970	116	5	1.20	2.25	0.24	0.48
1971	15	2	.84	1.04	.26	.74
1972	158	14	2.56	3.66	.60	.64
1973	246	13	1.59	3.75	.39	.36
1974	-	-	-	-	-	-
1975	788	20	2.64	4.28	.23	.59
1976	420	17	2.92	4.09	.33	.69
1977	349	15	2.52	3.82	.34	.63
1979	84	14	2.71	3.42	.97	.71
1980	202	18	2.39	3.99	.64	.52
Site 21 (station 01476435) Ridley Creek at Dutton Mill near West Chester						
1970	172	9	1.94	3.04	.34	.59
1971	32	5	1.56	2.19	.62	.60
1972	189	12	2.49	3.59	.44	.65
1973	63	8	1.85	3.04	.66	.50
1974	165	8	1.43	2.99	.31	.42
1975	-	-	-	-	-	-
1976	470	25	3.50	4.65	.45	.72
1977	105	17	2.78	3.78	1.01	.64
1979	236	15	2.15	3.90	.47	.49
1980	1144	21	3.12	4.37	.18	.70
Site 22 (station 01476790) East Branch Chester Creek at Green Hill						
1970	59	5	1.83	2.37	.40	.73
1971	43	7	2.04	2.53	.74	.73
1972	520	17	2.36	4.07	.28	.55
1973	144	11	2.34	3.28	.49	.66
1974	13	4	1.42	1.71	.83	.67
1975	-	-	-	-	-	-
1976	703	21	2.41	4.36	.27	.52
1977	162	12	2.34	3.52	.50	.61
1979	179	10	1.57	3.37	.37	.40
1980	247	16	2.77	3.92	.48	.67

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity, and relative evenness--Continued  
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity ( $H_{\max}$ )	Minimum diversity ( $H_{\min}$ )	Evenness (E)
Site 23 (station 01476830) East Branch Chester Creek at Milltown						
1970	83	4	1.87	2.04	0.23	0.90
1971	24	4	1.39	1.71	.57	.72
1972	299	10	1.93	3.36	.25	.54
1973	234	5	.97	2.35	.13	.38
1974	73	6	.88	2.44	.42	.23
1975	-	-	-	-	-	-
1976	244	19	1.90	4.26	.58	.36
1977	338	14	1.69	3.70	.32	.40
1979	490	19	2.38	4.26	.33	.52
1980	102	8	2.10	3.01	.45	.64
Site 24 (station 01476835) East Branch Chester Creek at Westtown School						
1970	55	1	0	0	0	0
1971	156	5	1.32	2.26	.19	.54
1972	901	11	1.64	3.48	.11	.45
1973	-	-	-	-	-	-
1974	1333	13	2.18	3.69	.09	.58
1975	-	-	-	-	-	-
1976	860	18	1.90	4.18	.19	.43
1977	1094	21	2.16	4.33	.18	.48
1979	49	10	2.41	3.32	1.01	.61
1980	2721	19	2.75	4.23	.08	.64
Site 26 (station 01479800) East Branch Red Clay Creek near Five Point						
1970	61	2	.25	1.03	.10	.16
1971	7	3	.77	1.33	.77	0
1972	181	5	1.52	2.27	.17	.64
1973	473	12	1.34	3.55	.21	.34
1974	-	-	-	-	-	-
1975	-	-	-	-	-	-
1976	826	12	1.90	3.60	.13	.51
1977	1463	13	1.23	3.70	.09	.32
1979	239	4	.90	2.02	.10	.41
1980	468	4	.35	1.97	.06	.15

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity, and relative evenness--Continued  
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H <sub>max</sub> )	Minimum diversity (H <sub>min</sub> )	Evenness (E)
Site 27 (station 01479780) West Branch Red Clay Creek at Kennett Square						
1970	182	1	0	0	0	0
1971	30	4	1.19	1.95	0.49	0.48
1972	177	5	.90	2.30	.17	.35
1973	108	6	1.19	2.44	.31	.41
1974	-	-	-	-	-	-
1975	60	9	1.91	3.11	.78	.48
1976	172	12	1.75	3.48	.47	.43
1977	70	5	1.10	2.15	.35	.41
1979	29	8	1.83	2.83	1.13	.41
1980	556	3	1.01	1.58	.03	.63
Site 28 (station 01478120) East Branch White Clay Creek near Avondale						
1970	76	4	.87	1.88	.25	.38
1971	26	6	2.04	2.34	.88	.79
1972	202	10	2.18	3.22	.34	.64
1973	293	10	2.34	3.26	.25	.70
1974	-	-	-	-	-	-
1975	-	-	-	-	-	-
1976	820	18	3.05	4.16	.20	.72
1977	935	23	2.65	4.52	.23	.56
1979	855	27	3.45	4.75	.30	.71
1980	1188	17	2.91	4.11	.14	.70
Site 29 (station 01478190) Middle Branch White Clay Creek near Wickerton						
1970	61	6	.95	2.42	.48	.24
1971	13	3	1.05	1.44	.56	.55
1972	677	15	2.25	3.84	.19	.56
1973	290	6	.85	2.56	.14	.29
1974	156	6	1.44	2.48	.23	.54
1975	-	-	-	-	-	-
1976	174	12	1.97	3.52	.47	.49
1977	283	12	2.32	3.56	.32	.62
1979	84	13	2.03	3.53	.90	.43
1980	1376	14	1.77	3.78	.10	.45



Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity, and relative evenness--Continued  
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H <sub>max</sub> )	Minimum diversity (H <sub>min</sub> )	Evenness (E)
Site 30 (station 01478220) West Branch White Clay Creek near Chesterville						
1970	42	4	0.97	1.97	0.38	0.37
1971	-	-	-	-	-	-
1972	367	15	2.44	3.86	.32	.60
1973	259	7	1.36	2.72	.19	.46
1974	-	-	-	-	-	-
1975	669	14	2.09	3.82	.18	.52
1976	391	19	2.04	4.21	.39	.43
1977	823	17	2.30	4.06	.19	.55
1979	80	10	2.53	3.02	.70	.79
1980	908	14	2.72	3.83	.14	.70
Site 31 (station 01494900) East Branch Big Elk Creek at Elkview						
1970	69	1	0	0	0	0
1971	6	3	1.08	1.08	.82	1.0
1972	325	14	1.92	3.71	.33	.47
1973	43	6	1.76	2.36	.62	.65
1974	-	-	-	-	-	-
1975	-	-	-	-	-	-
1976	199	19	3.77	4.14	.68	.89
1977	1005	20	2.60	4.27	.19	.59
1979	37	9	2.21	2.76	1.09	.67
1980	972	18	3.12	4.10	.17	.75
Site 32 (station 01494950) West Branch Big Elk Creek near Oxford						
1970	104	4	1.83	1.90	.19	.96
1971	15	4	1.34	1.99	.76	.47
1972	921	17	2.11	4.04	.17	.50
1973	441	11	1.36	3.38	.20	.37
1974	-	-	-	-	-	-
1975	-	-	-	-	-	-
1976	256	20	2.42	4.33	.59	.49
1977	758	22	2.87	4.42	.26	.63
1979	-	-	-	-	-	-
1980	1304	15	2.59	3.93	.11	.65

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity,  
and relative evenness--Continued  
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H <sub>max</sub> )	Minimum diversity (H <sub>min</sub> )	Evenness (E)
Site 33 (station 01588340) East Branch Octoraro Creek at Christiana						
1970	76	4	1.72	1.88	0.25	0.91
1971	63	5	1.50	2.31	.38	.58
1972	705	13	2.17	3.66	.16	.57
1973	385	12	1.72	3.49	.24	.45
1974	172	11	2.34	3.44	.43	.63
1975	-	-	-	-	-	-
1976	-	-	-	-	-	-
1977	1125	23	2.17	4.55	.20	.45
1979	141	7	1.74	2.70	.30	.60
1980	476	11	2.67	3.41	.19	.77
Site 34 (station 01578343) Valley Creek at Atglen						
1970	77	5	2.01	2.27	.32	.87
1971	5	2	.66	.98	.46	.39
1972	334	14	2.37	3.84	.33	.58
1973	136	7	1.59	2.76	.31	.52
1974	130	7	1.25	2.79	.32	.38
1975	-	-	-	-	-	-
1976	-	-	-	-	-	-
1977	768	19	3.04	4.21	.22	.71
1979	13	6	1.48	2.04	1.33	.22
1980	1288	12	2.33	3.57	.09	.64
Site 35 (station 01578345) East Branch Octoraro Creek at Steelville						
1970	102	5	1.78	2.28	.26	.75
1971	43	4	1.65	2.05	.38	.76
1972	858	14	1.60	3.77	.15	.40
1973	138	6	1.59	2.46	.26	.60
1974	140	12	2.20	3.56	.56	.55
1975	-	-	-	-	-	-
1976	182	13	2.52	3.50	.49	.67
1977	1174	17	2.12	4.03	.14	.51
1979	79	10	2.14	3.36	.71	.54
1980	1048	11	2.76	3.44	.10	.80

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity,  
and relative evenness--Continued  
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H <sub>max</sub> )	Minimum diversity (H <sub>min</sub> )	Evenness (E)
Site 36 (station 01480700) East Branch Brandywine Creek near Downingtown						
1970	86	7	1.39	2.69	0.45	0.42
1971	38	5	1.03	2.29	.55	.28
1972	127	14	2.22	3.55	.71	.53
1973	201	13	1.93	3.63	.45	.46
1974	147	14	1.67	3.72	.63	.34
1975	357	21	2.61	4.21	.47	.57
1976	685	29	2.66	4.83	.38	.51
1977	325	24	2.97	4.52	.59	.61
1979	55	10	1.80	3.16	.93	.39
1980	3840	14	2.64	3.80	.04	.69
Site 37 (station 01480430) West Branch Brandywine Creek at Rock Run						
1970	66	7	1.75	2.71	.54	.55
1971	20	2	.81	.87	.22	.90
1972	128	14	2.56	3.57	.70	.65
1973	117	16	2.48	3.79	.87	.55
1974	113	7	1.40	2.68	.36	.45
1975	40	7	1.89	2.77	.78	.56
1976	266	20	2.96	4.19	.57	.66
1977	221	15	2.79	3.90	.49	.67
1979	77	9	1.33	3.09	.64	.28
1980	468	19	3.01	4.23	.34	.68
Site 38 (station 01480640) West Branch Brandywine Creek at Wawaset						
1970	58	2	.18	.94	.10	.10
1971	26	2	.83	.90	.18	.91
1972	507	11	1.55	3.39	.18	.43
1973	-	-	-	-	-	-
1974	-	-	-	-	-	-
1975	277	11	1.60	3.37	.29	.42
1976	196	10	1.71	3.30	.35	.46
1977	52	10	1.83	3.01	.97	.42
1979	52	4	.85	1.84	.33	.35
1980	464	13	2.40	3.70	.23	.63

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity,  
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H <sub>max</sub> )	Minimum diversity (H <sub>min</sub> )	Evenness (E)
Site 40 (station 01481030) Brandywine Creek near Chadds Ford						
1970	-	-	-	-	-	-
1971	-	-	-	-	-	-
1972	133	8	1.77	2.99	.37	.53
1973	653	11	1.34	3.43	.14	.36
1974	246	10	1.66	3.31	.29	.46
1975	717	16	1.74	4.02	.20	.40
1976	460	13	2.08	3.66	.23	.54
1977	103	15	2.48	3.91	.90	.53
1979	132	18	3.13	3.96	.90	.73
1980	549	10	2.53	3.35	.15	.74
Site 42 (station 01480655) East Branch Brandywine Creek at Glenmoore						
1973	134	14	2.29	3.73	.68	.53
1974	113	17	2.20	3.99	.95	.41
1975	-	-	-	-	-	-
1976	424	24	3.16	4.56	.47	.66
1977	120	16	2.55	3.80	.85	.56
1979	305	14	2.71	3.82	.35	.68
1980	444	18	2.49	4.16	.34	.56
Site 43 (station 01480647) East Branch Brandywine Creek near Struble Dam						
1973	191	8	1.38	3.04	.28	.40
1974	-	-	-	-	-	-
1975	228	8	1.07	2.98	.24	.30
1976	295	15	1.95	3.89	.39	.44
1977	12	6	1.64	1.90	1.38	.50
1979	130	10	1.80	3.11	.48	.50
1980	188	19	2.75	4.27	.72	.57

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity,  
and relative evenness--Continued  
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H <sub>max</sub> )	Minimum diversity (H <sub>min</sub> )	Evenness (E)
Site 44 (station 01480903) Valley Creek at Mullsteins Meadows near Downingtown						
1973	770	16	1.65	3.94	0.19	0.39
1974	949	16	1.66	3.97	.16	.39
1975	997	18	2.64	4.14	.17	.62
1976	630	20	2.50	4.29	.28	.55
1977	433	18	2.33	4.04	.34	.54
1979	381	14	3.21	3.72	.29	.85
1980	1596	12	2.91	3.55	.07	.82
Site 45 (station 01480632) Doe Run at Springdell						
1973	15	7	1.45	2.22	1.45	0
1974	147	7	1.12	2.67	.29	.35
1975	575	18	2.48	4.21	.27	.56
1976	836	22	2.19	4.36	.24	.47
1977	665	16	3.0	3.99	.21	.74
1979	150	15	2.71	3.64	.67	.69
1980	628	14	2.86	3.83	.19	.73
Site 46 (station 01480629) Buck Run at Doe Run						
1973	346	8	.97	2.95	.17	.29
1974	54	5	1.56	2.37	.42	.58
1975	790	16	1.94	3.97	.18	.46
1976	218	9	1.20	3.09	.28	.33
1977	795	18	1.70	4.11	.21	.38
1979	5	5	1.38	1.38	1.38	1.00
1980	420	10	2.30	3.24	.19	.69

Table 4.--Brillouin's diversity index, maximum diversity, minimum diversity,  
and relative evenness--Continued  
[A dash indicates no data]

Year	Total number of organisms	Total number of taxa	Brillouin's diversity index (H)	Maximum diversity (H <sub>max</sub> )	Minimum diversity (H <sub>min</sub> )	Evenness (E)
Site 47 (station 01480656) Indian Run near Springton						
1973	-	-	-	-	-	-
1974	188	21	2.89	4.43	0.80	0.58
1975	446	28	3.02	4.84	.53	.58
1976	135	18	2.97	4.03	.88	.66
1977	42	15	2.90	3.69	1.71	.60
1979	185	28	3.57	4.68	1.08	.69
1980	622	28	3.44	4.70	.40	.71
Site 48 (station 01480648) East Branch Brandywine Creek near Cupola						
1973	218	14	2.59	3.76	.46	.65
1974	188	17	2.58	3.86	.64	.60
1975	749	28	2.89	4.81	.34	.57
1976	518	23	3.15	4.48	.38	.67
1977	583	21	2.88	4.40	.31	.63
1979	166	21	2.47	4.41	.88	.45
1980	624	16	3.10	3.91	.22	.78
Site 49 (station 01473167) Little Valley Creek at Howellville						
1973	29	2	.17	1.04	.17	0
1974	0	0	0	0	0	0
1975	988	12	2.54	3.56	.11	.70
1976	449	12	2.59	3.55	.22	.71
1977	279	13	2.18	3.65	.35	.56
1979	222	14	2.25	3.84	.45	.54
1980	1983	15	2.26	3.88	.08	.57
Site 50 (station 01473168) Valley Creek near Valley Forge						
1973	25	2	0.19	1.04	0.19	0
1974	153	8	1.42	2.88	.33	.43
1975	534	10	1.89	3.30	.15	.55
1976	849	14	1.73	3.81	.15	.43
1977	1003	13	1.65	3.66	.12	.43
1979	263	9	1.98	3.10	.24	.61
1980	1412	12	2.64	3.59	.08	.73

Table 5.--Median, mean, standard deviation, and standard error values of Brillouin's diversity index by site

Site number	Station number	Number of samples	Median	Mean	Standard deviation	Standard error
1	01472170	8	2.3	2.1	0.65	0.23
2	01472174	9	2.1	2.3	.77	.26
3	014721854	9	2.3	2.4	.40	.13
4	014721884	7	2.3	2.2	.60	.23
5	01472190	9	2.4	2.4	.80	.27
6	01472109	9	1.7	1.6	.74	.25
7	01472110	9	2.1	2.3	1.17	.39
8	01472054	8	2.0	2.2	.45	.16
9	01472065	9	2.2	2.2	.43	.14
10	01472080	8	2.5	2.4	.57	.20
11	01472129	7	2.8	2.7	.45	.17
12	01472140	9	2.7	2.6	.36	.12
13	01472138	9	2.3	2.8	.66	.22
14	01472154	9	2.8	2.6	.56	.19
15	01472157	10	2.6	2.6	.68	.21
17	01475300	9	2.4	2.2	.74	.25
18	01475830	8	2.2	2.4	.64	.23
19	01475840	9	2.7	2.5	.57	.19
20	01476430	9	2.5	2.2	.75	.25
21	01476435	9	2.2	2.3	.71	.24
22	01476790	9	2.3	2.1	.44	.15
23	01476830	9	1.9	1.7	.51	.17
24	01476835	8	2.0	1.8	.85	.30
26	01479800	8	1.1	1.0	.57	.20
27	01479680	9	1.2	1.2	.59	.20
28	01478120	8	2.5	2.4	.79	.28
29	01478190	9	1.7	1.6	.57	.19
30	01478220	8	2.2	2.1	.60	.21
31	01494900	8	2.1	2.1	1.18	.42
32	01494950	7	2.1	2.1	.60	.23
33	01578340	8	2.0	2.0	.40	.14
34	01578343	8	1.8	1.8	.75	.26
35	41578345	9	2.1	2.0	.42	.14
36	01480700	10	2.1	2.1	.63	.20
37	01480434	10	2.2	2.1	.77	.24
38	01480640	8	1.6	1.4	.70	.25
40	01481030	8	1.9	2.1	.59	.21
42	01480653	6	2.5	2.6	.34	.14
43	01480647	6	1.7	1.8	.57	.23
44	01480903	7	2.5	2.4	.59	.22
45	01480632	7	2.5	2.3	.72	.27
46	01480629	7	1.4	1.6	.45	.17
47	01480656	6	3.0	3.1	.30	.12
48	01480648	7	2.9	2.8	.27	.10
49	01473167	7	2.3	1.7	1.13	.43
50	01473168	7	1.7	1.6	.75	.28

Table 6.--Alphabetic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania

[Name appearing in parenthesis is the currently accepted correct taxonomic name]

---

Ablabesmyia sp.  
 Acarina  
Acroneuria sp.  
Aeschna sp.  
Agrion (Calopteryx) sp.  
Alisotrichia sp. (early instar Leucotrichia pictipes)  
Allocapnia sp.  
Allonarcys sp.  
Ameletus sp.  
Amnicola sp.  
Amphiagrion sp.  
Amphinemura sp.  
 Amphipoda  
Anchytarsus bicolor  
Ancyronyx variegata  
 Anisoptera  
 Annelida  
Antocha sp.  
Apatania sp.  
 Araneida  
Argia sp.  
Arzama (Bellura) sp.  
Asellus sp.  
 Astacidae  
Atherix sp.  
  
Baetis sp.  
Berosus sp.  
Boyeria sp.  
Brachycentrus sp.  
Brillia sp.  
  
Caenis sp.  
Calopteryx sp.  
Campeloma sp.  
 Capniidae  
Cardiocladius sp.  
Cataclysta (Parargyractis or Petrophila) sp.  
Centroptilum sp.  
 Ceratopogonidae  
Chaetocladius sp.  
Chaoborus sp.  
Chauliodes sp.  
Cheumatopsyche sp.  
Chimarra sp.



Table 6.--Alphabetic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania--Continued

[Name appearing in parenthesis is the currently accepted correct taxonomic name]

---

Chironomidae  
Chironomus sp.  
Chloroperlidae  
Climacia sp.  
Coelenterata  
Coenagriidae (Coenagrionidae)  
Coenagrionidae  
Coleoptera  
Collembola  
Conchapelopia sp.  
Copepoda  
Corydalis cornutus  
Corynoneura sp.  
Cricotopus sp.  
Cryptochironomus sp.  
Cyclops sp.  
Cyclorrhapha (Suborder Diptera)  
Cyrtellus fraternus

Decapoda  
Diamesa sp.  
Diaptomus sp.  
Dicranota sp.  
Dicrotendipes (Limnochironomus) sp.  
Diplectrona modesta  
Diplocladius sp.  
Diptera  
Dolomedes sp.  
Dolophiloides sp.  
Dubiraphia sp.

Ectopria nervosa  
Empididae  
Enallagma sp.  
Endochironomus sp.  
Entomobryidae  
Epeorus sp.  
Ephemerella sp.  
Ephemeroptera  
Eukiefferiella sp.  
Eurylophella sp.

Ferrissia sp.

Table 6.--Alphabetic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania--Continued

[Name appearing in parenthesis is the currently accepted correct taxonomic name]

---

Gammarus sp.  
 Gastropoda  
Geranomyia sp.  
Glossosoma sp.  
Glyptotendipes sp.  
Goeldichironomus sp.  
Goera sp.  
Gomphus sp.  
Gonomyia sp.  
Gyraulus sp.  
  
Helichus sp.  
Helicopsyche borealis  
Helius sp.  
Hemerodromia sp.  
 Hemiptera  
Heptagenia sp.  
Heterotrissocladius sp.  
Hexatoma sp.  
 Hirudinea  
Hyalolella azteca  
Hydatophylax sp.  
Hydra sp.  
 Hydracarina (Acarina)  
Hydrobius sp.  
Hydropsyche sp.  
Hydroptila sp.  
Hygrotus sp.  
 Hymenoptera  
  
Ischnura sp.  
Isonychia sp.  
 Isopoda  
  
Kiefferulus sp.  
  
Laccophilus sp.  
 Lepidoptera  
Lepidostoma sp.  
Leptophlebia sp.  
Leucotrichia pictipes  
Leuctra sp.  
 Limnephilidae  
Limnius (Oulimnius) sp.

Table 6.--Alphabetic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania--Continued

[Name appearing in parenthesis is the currently accepted correct taxonomic name]

---

Limnochironomus sp.

Lirceus sp.

Lumbriculus sp.

Lymnaea sp.

Lype diversa

Macronema sp.

Macronychus glabratus

Megaloptera

Menetus sp.

Mesovelia sp.

Metriocnemus sp.

Micrasema sp.

Microcylloepus sp.

Micropsectra sp.

Microtendipes sp.

Molanna sp.

Muscidae

Musculium sp.

Mymaridae

Mystacides sp.

Naididae

Nanocladius sp.

Nectopsyche sp.

Nehalennia sp.

Neoperla sp.

Neophylax sp.

Neozavrelia sp.

Neureclipsis sp.

Neuroptera

Nigronia sp.

Nilotanytus sp.

Nilothauma sp.

Nyctiophylax sp.

Nymphula sp.

Ochrotrichia sp.

Odonata

Oecetis sp.

Oligochaeta

Oligostomis ocelligera

Optioservus sp.

Table 6.--Alphabetic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania--Continued

[Name appearing in parenthesis is the currently accepted correct taxonomic name]

---

Orthocladius sp.  
 Ostracoda  
Oulimnius latiusculus  
  
Paracapnia sp.  
Parachironomus sp.  
Paracladopelma sp.  
Paragnetina sp.  
Paraleptophlebia sp.  
Parametriocnemus sp.  
Parargyractis (Petrophila) sp.  
Paratanytarsus sp.  
 Pelecypoda  
Pelocoris sp.  
Peltoperla sp.  
 Perlodidae  
Petrophila sp.  
Phaenopsectra sp.  
Phasganophora sp.  
 Philopotamidae  
Phylocentropus sp.  
Physa sp.  
 Planariidae  
 Plecoptera  
Plecopteracoluthus sp.  
Polycentropus sp.  
Polypedilum sp.  
Potamyia flava  
Potthastia sp.  
Procladius sp.  
Promoresia sp.  
Psectrocladius sp.  
Psephenus herricki  
Pseudocloeon sp.  
Pseudodiamesa sp.  
Psychomyia sp.  
 Psychomyiid genus A (Nyctiophylax sp.)  
 Psychomyiid genus B (Nyctiophylax sp.)  
 Pyralidae  
  
Rhagovelia obesa  
Rheotanytarsus sp.  
Rhyacophila sp.

Table 6.--Alphabetic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania--Continued

[Name appearing in parenthesis is the currently accepted correct taxonomic name]

---

Saldidae  
Serratella sp.  
Sialis sp.  
Sigara sp.  
 Simuliidae  
Simulium sp.  
Siphonurus sp.  
Smittia sp.  
Smytherides sp.  
Sortosa (Dolophilodes) sp.  
Sphaerium sp.  
Stactobiella sp.  
Stempellina sp.  
Stenacron sp.  
Stenelmis sp.  
Stenonema sp.  
Stylaria sp.  
Symphitopsyche sp.  
Synorthocladius sp.  
  
Tabanus sp.  
Taeniopteryx sp.  
 Tanypodinae (Subfamily Chironomidae)  
Tanytarsus sp.  
Thienemanniella sp.  
Tipula sp.  
Trentonius (Dolophilides) sp.  
Trichocorixa sp.  
 Trichoptera  
 Tricladida  
Tricorythodes sp.  
 Tubificidae  
 Turbellaria  
  
 Viviparidae  
  
Wormaldia sp.  
  
 Zygoptera

Table 7.--Systematic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania

---

Hydrozoa (Hydroids)

Hydra sp.

Turbellaria (Flatworms)

Tricladida

Planariidae

Gastropoda (Snails, Limpets)

Amnicola sp.

Campeloma sp.

Ferrissia sp.

Gyraulus sp.

Helisoma sp.

Lymnaea sp.

Menetus sp.

Physa sp.

Viviparidae

Pelecypoda (Clams)

Sphaerium sp.

Musculium sp.

Annelida (Earthworms, Leeches)

Oligochaeta

Naididae

Stylaria sp.

Lumbriculidae

Lumbriculus sp.

Tubificidae

Hirudinea

Copepoda (Copepods)

Cyclops sp.

Diaptomus sp.

Ostracoda (Seed Shrimps)

Isopoda (Sow Bugs)

Asellus sp.

Lirceus sp.

Amphipoda (Scuds)

Gammarus sp.

Hyaella azteca

Decapoda (Crayfish)

Astacidae

Table 7.--Systematic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania--Continued

---

Acarina (Water Mites)  
Hydracarina

Araneida (Spiders)  
Dolomedes sp.

Collembola (Springtails)  
Entomobryidae  
Smynthurides sp.

Ephemeroptera (Mayflies)  
Ameletus sp.  
Baetis sp.  
Caenis sp.  
Centroptilum sp.  
Epeorus sp.  
Ephemerella sp.  
Eurylophella sp.  
Heptagenia sp.  
Isonychia sp.  
Leptophlebia sp.  
Paraleptophlebia sp.  
Pseudocloeon sp.  
Serratella sp.  
Siphonurus sp.  
Stenacron sp.  
Stenonema sp.  
Tricorythodes sp.

Odonata (Dragonflies, Damselflies)

Anisoptera  
Aeschna sp.  
Boyeria sp.  
Gomphidae  
Gomphus sp.  
Ischnura sp.  
Lanthus sp.

Zygoptera  
Amphiagrion sp.  
Argia sp.  
Calopteryx sp.  
Coenagrionidae  
Enallagma sp.  
Nehalennia sp.

Table 7.--Systematic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania--Continued

---

Plecoptera (Stoneflies)

Acroneuria sp.  
Allocaenia sp.  
Allonarcys sp.  
Amphinemura sp.  
Capniidae  
Chloroperlidae  
Isoperla sp.  
Leuctra sp.  
Neoperla sp.  
Paracania sp.  
Paragnetina capitata  
Peltoperla sp.  
Perlodidae  
Phasganophora sp.  
Taeniopteryx sp.

Hemiptera (Bugs)

Gerridae  
Mesovelgia sp.  
Pelocoris sp.  
Rhagovelgia obesa  
Saldidae  
Sigara sp.  
Trichocorixa sp.

Megaloptera (Alderflies, Dobsonflies, and Fishflies)

Chauliodes sp.  
Corydalus cornutus  
Nigronia sp.  
Sialis sp.

Neuroptera (Spongillaflyies)

Climacia sp.

Lepidoptera (Butterflies and moths)

Bellura sp.  
Nymphula sp.  
Paragyraetis sp. (Petrophila sp.)  
Pyralidae



Table 7.--Systematic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania--Continued

---

Trichoptera (Caddisflies)

Apatania sp.  
Brachycentrus sp.  
Cheumatopsyche sp.  
Chimarra sp.  
Cyrnellus fraternus  
Dolophilodes sp.  
Diplectrona modesta  
Glossosoma sp.  
Goera sp.  
Helicopsyche borealis  
Hydatophylax sp.  
 Hydropsychidae  
Hydropsyche sp.  
Hydroptila sp.  
Lepidostoma sp.  
Leucotrichia pictipes  
 Limnephilidae  
Lype diversa  
Macronema sp.  
Micrasema sp.  
Molanna sp.  
Mysticides sp.  
Nectopsyche sp.  
Neophylax sp.  
Neureclipsis sp.  
Nyctiophylax sp.  
Ochrotrichia sp.  
Oecetis sp.  
Oligostomis ocelligera  
 Philopomatidae  
Phylocentropus sp.  
Polycentropus sp.  
Potamyia flava  
Psychomyia sp.  
Rhyacophila sp.  
Stactobiella sp.  
Symphitopsyche sp.  
Wormaldia sp.

Table 7.--Systematic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania--Continued

---

Diptera (Flies)

Antocha sp.  
Atherix sp.  
Ceratopogonidae  
Chaoborus sp.  
Chironomidae  
Cyclorrhapha (Suborder)  
Dicranota sp.  
Empididae  
Geranomyia sp.  
Gonomyia sp.  
Helius sp.  
Hemerodromia sp.  
Hexatoma sp.  
Limnophora sp.  
Muscidae  
Simuliidae  
Simulium sp.  
Tabanus sp.  
Tipulidae  
Tipula sp.

Chironomidae (Midges)

Ablabesmyia sp.  
Brilla sp.  
Cardiocladius sp.  
Chaetocladius sp.  
Chironomus sp.  
Conchapelopia sp.  
Corynoneura sp.  
Cricotopus sp.  
Cryptochironomus sp.  
Diamesa sp.  
Diplocladius sp.  
Endochironomus sp.  
Eukiefferiella sp.  
Glyptotendipes sp.  
Goeldichironomus sp.  
Heterotrissocladius sp.  
Kiefferulus sp.  
Limnochironomus sp. (Dicrotendipes sp.)  
Metriocnemus sp.  
Micropsectra sp.  
Microtendipes sp.  
Nanocladius sp.

Table 7.--Systematic checklist of taxa reported in the benthic-invertebrate sampling project, Chester County, Pennsylvania--Continued

---

Chironomidae (Midges)--Continued

Neozavarelia sp.  
Nilotanypus sp.  
Nilothauma sp.  
Orthocladius sp.  
Parachironomus sp.  
Paracladopelma sp.  
Parametriocnemus sp.  
Paratanytarsus sp.  
Phaenopsectra sp.  
Plecopteracoluthus sp.  
Polypedilum sp.  
Potthastia sp.  
Procladius sp.  
Psectrocladius sp.  
Pseudodiamesa sp.  
Rheotanytarsus sp.  
Smitta sp.  
Stempellina sp.  
Synorthocladius sp.  
Tanypodinae (subfamily)  
Tanytarsus sp.  
Thienemanniella sp.

Hymenoptera (Wasps)

Mymaridae

Coleoptera (Beetles)

Ancyronyx variegata  
Anchytarsus bicolor  
Berosus sp.  
Dubiraphia sp.  
Ectopria nervosa  
Helichus sp.  
Hydrobius sp.  
Hygrotus sp.  
Laccophilus sp.  
Macronychus glabratus  
Microcylloepus sp.  
Optioservus sp.  
Oulimnius latiusculus  
Promoresia sp.  
Psephenus herricki  
Stenelmis sp.